THE BRITISH PTERIDOLOGICAL SOCIETY

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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and today continues as a focus for fern enthusiasts. It provides a wide range of information about ferns through the medium of its publications and other literature. It also organises formal talks, informal discussions, field meetings, garden visits, plant exchanges, a spore exchange scheme and fern book sales. The Society has a wide membership that includes gardeners, nurserymen and botanists, both amateur and professional. The Society's journals, *The Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. *The Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports. **WWW site**: http://www.eBPS.org.uk

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(**Front cover**: *Polystichum setiferum* 'Bevis' (*P. aculeatum* 'Pulcherrimum Jones') from Jones' Nature Prints.)

Back numbers of *The Fern Gazette*, *Pteridologist* and *Bulletin* are available for purchase from P.J. Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ; E-mail: BackNumbers@eBPS.org.uk

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NATIONAL FIELD MEETINGS

CATALUÑA, NORTH-EAST SPAIN – 11-13 March

Jurgie Schedler (Friday & Saturday) & Keith Gooderham (Sunday)

What an occasion for our BPS, a field trip to sunny Spain, or more precisely to Cataluña. Seven members assembled on the Friday night in Cadaqués, a small coastal town nestling among hills and only accessible via a windy road or by sea. One could understand why Salvador Dali chose this as his home to live out his surrealistic dream.

We decided to skip breakfast the following day, as we had to cover long distances to our chosen fern sites. We left Cadaqués at 7a.m. The sun was just rising over the sea, the sky was clear and the temperature was minus two degrees. In just over an hour we reached our first destination, the medieval town of Sant Llorenç de la Muga, lying in the foothills of the Pyrenées. We ferned along the ancient walls and found *Asplenium ceterach* and *Polypodium cambricum* in abundance, *Adiantum capillus-veneris*, *Asplenium trichomanes* subsp. *quadrivalens* and two *A. scolopendrium*; the only sighting of this common English fern was in the derelict town centre millrace. We crossed the river Muga via the small steel bridge and found large patches of *Polypodium cambricum*, but the fronds had been badly affected by frost. Only later did we find out that Cataluña had been hit by unseasonably cold weather with hardly any rain.

At 9a.m. sharp, life returned to Sant Llorenç de la Muga and we were able to grab some breakfast. Our next stop was only a short drive further into the foothills above Panta de Boadella for the most arduous section of our trip. Our constant struggle with the native flora of brambles, rosemary, lavender and dense shrubs combined with climbing along and over rock-faces made progress slow. We found a few isolated *Cheilanthes tinaei*, *Asplenium onopteris*, *A. trichomanes* subsp. *quadrivalens* and *Pellaea calomelanos*. The latter were in poor condition due to the dry spell. In a shadier spot, two absolutely splendid *Asplenium septentrionale* were found, one of them exceptionally large and multi-crowned.

At midday we scrambled back to our cars, the cold long-forgotten as we were now being baked by the sun. A further one-and-a-half-hour drive took us further into the interior towards the Andorran border. Lunch was taken at Gombrén in a typical Catalan restaurant with outstanding food. A scenic serpentine road then led us high up the mountain to the Monastery at Montgrony for our afternoon ferning. We were rewarded with outstanding views of the snow-capped Pyrenées and the green valleys below. To our disappointment we found *Asplenium seelosii* in a rather sorry and lifeless state in this sun-baked site. We can only hope that the plants will recover and regain their beauty as seen by Andrew the previous year.

The contradiction to this site was 50 yards down the road in the deep shade of the mountain, where we found snow still lying on the ground and a mountain stream still frozen solid in a gorge. We found many plants of *Asplenium fontanum* affected by the cold and frost. Seven

smiling members gathered in front of frozen rapids for a group picture – 'Holiday on Ice'. Maybe we should return next year to find out if the ferns have recovered.

photo: A. Leonard

Cataluña, Spain

Ann Stark, Pat Acock, Jurgie Schedler, David & Avril Walkinshaw,
Keith Gooderham, Andrew Leonard

Below the walls of the Monastery we followed a footpath and found *Adiantum capillus-veneris* growing in small hollows and caves in the rock-face but here as well it sadly did not look at its best. Further along the path we found *Asplenium fontanum* amongst small trees and shrubbery, to our relief, in good condition. After light refreshment at the Monastery restaurant, we left the site for our journey back to Cadaqués.

By nine o'clock on Sunday the party was assembled and ready for the road. No long trips today, with our first stop being in one of the steep valleys just behind the town. At one time, every valley and hillside around Cadaqués had been intensively farmed and countless terraces constructed on the impossibly steep, arid hillsides in order to bring every piece of ground into production. But now all of the terraces have long since been abandoned and are being rapidly reclaimed by nature, with a dense scrub of lavender, rosemary and *Cistus* together with the occasional olive tree and prickly pear cactus. Despite the dryness, ferns were still to be found, with *Polypodium cambricum* predominant and looking remarkably fresh and verdant compared to the frosted ones that we had seen the day before. However, there were other rarer and more interesting ferns to be found on the terrace walls and at the base of some of the rock-faces in the steeper parts of the valley. Unlike the *Polypodium* these were obvious xerophytes with hairy inward-curled leaves and included *Cosentinia vellea*, *Cheilanthes maderensis* and *C. tinaei*. Ironically, for all our clambering up and down the terraces of the steep valley side, the best specimens that we found were in a stone-lined drainage channel that ran through an olive grove and in a relatively new dry-stone wall adjacent to the track where we had parked the cars!

Our second site was in a small, more open valley just outside Cadaqués on the road to Port Lligat. Again, *Polypodium cambricum* dominated, but in favoured sites sheltered by the boulders that littered the valley sides and floor we found the occasional clump of *Asplenium obovatum* subsp. *lanceolatum* and large plants of *Anogramma leptophylla*. From here, we continued the short distance to Port Lligat for the compulsory tourist visit to Salvador Dali's house.

From Port Lligat we continued on to Cap de Creus, an arid rocky headland and Spain's most easterly point. After an excellent lunch, we set off a little way down the road back towards Port Lligat before stopping at our third and final site. The vegetation here was even denser than at the last two sites, with a thick scrub of juniper dominating. However, in a small valley ferns were again to be found, including *Asplenium obovatum* subsp. *obovatum*. Later, *A. obovatum* subsp. *lanceolatum* was found, along with *A. adiantum-nigrum*. Perhaps the best find for the site was an earthstar discovered by Avril Walkinshaw. Towards the end of the visit, the Scottish contingent decided to explore further along the coast towards Cadaqués while the remainder of the party continued to explore the site. However, it was not too long before the whole group was reunited at a bar on the sea front at Cadaqués for a warming drink. Dinner that evening was once more at our favourite restaurant, with an opportunity to relive our experiences and discoveries from the previous two days as well as other past ferning adventures.

Although the expedition was all too short, it was full of new experiences, places and ferns and our sincere thanks must go to Andrew Leonard for leading this trip.

Pteridophytes of Cataluña, March 2005

Site	1	2	3	4	5	6
Adiantum capillus-veneris	✓		✓			
Anogramma leptophylla					✓	✓
Asplenium adiantum-nigrum						✓
A. ceterach	✓	✓				
A. fontanum			✓			
A. obovatum subsp. lanceolatum				✓	✓	✓
A. obovatum subsp. obovatum						✓
A. onopteris		✓		✓	✓	✓
A. ruta-muraria			✓			
A. scolopendrium	✓					
A. seelosii			✓			
A. septentrionale		✓				
A. trichomanes subsp. quadrivalens	✓	✓	✓			
Cheilanthes maderensis				✓		
C. tinaei		✓		✓		
Cosentinia vellea				✓		
Equisetum ramosissimum	✓					
Pellaea calomelanos		✓				
Polypodium cambricum	✓	✓	✓	✓	✓	✓
Pteridium aquilinum		✓				
Selaginella denticulata					✓	

Site 1	Sant Llorenç de la Muga	42° 19' 20" N, 2° 47' 19" E
Site 2	Above Panta de Boadella	42° 19' 29" N, 2° 48' 01" E
Site 3	Monastery Montgrony	42° 16' 01" N, 2° 05' 00" E
Site 4	Above Cadaqués	42° 17' 42" N, 3° 16' 24" E
Site 5	NE of Cadaqués	42° 17' 56" N, 3° 17' 02" E
Site 6	Cap de Creus	42° 19' 02" N, 3° 17' 41" E

PEMBROKESHIRE – 4-5 June Bruce Brown (Saturday) & Jonathan Crowe (Sunday)

Seven members met up in Haverfordwest to explore the ferns of Pembrokeshire at a good variety of sites, ably researched at short notice by Pat Acock and Martin Rickard, due to Barry Thomas's heavy work commitments. The high hedgebanks lining the lanes and tracks were characteristic of the county and were everywhere luxuriantly bedecked with flowers and ferns. As I walked into town, I admired lots of *Asplenium scolopendrium*, *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. affinis* subsp. *borreri*, *D. dilatata*, *Polystichum setiferum*, *Polypodium interjectum*, *P. vulgare* and *Pteridium aquilinum*. *Asplenium trichomanes* subsp. *quadrivalens* was prolific on mortared walls. These ferns were to be virtually constant companions at all the sites we subsequently visited.

We started on a slightly cloudy but fine morning at Cwm-yr-Eglwys (22/014400) to explore Dinas Head on the north coast. There was a possible site for *Asplenium obovatum* subsp. *lanceolatum* in the area but it remained hidden to us. However, *A. adiantum-nigrum* was present on the cemetery wall. Some small *Osmunda regalis* were spotted close to the coastal path, one in a wet flush with *Blechnum spicant*, and then a larger colony could be seen through binoculars fringing the high sea cliffs, but definitely beyond reach. Pat and Martin climbed the steep brambly hillside above the path looking for *Dryopteris aemula*. Martin noticed the first specimen, then Pat quickly came upon a fine area graced with around 100 plants (22/014409).

After a coffee break, our second stop was the well-wooded Cwm Gwaun, a long steep-sided valley running eastwards from Fishguard. We parked at Llanychaer (12/990351) and entered the woods by the riverside. Interesting *Dryopteris affinis* types abounded here, including subspp. *affinis*, *borreri* and *cambrensis* (12/993352), a possible '*insolens*' type and some *Dryopteris* x *complexa* hybrids. Our first *Oreopteris limbosperma* was also spotted. Further, on at a damp rocky bluff by the river (12/995352), some fine hanging colonies of *Hymenophyllum tunbrigense* were much admired and photographed.

Lunch was taken at the Rosebush Inn (22/075294), sitting outside in the garden as the day was now very pleasant. The nearby disused slate quarries provide the only Pembrokeshire record for *Cryptogramma crispa*. After some diligent searching amongst the deep holes and levels gouged out of the steep hillside we eventually found it, restricted to a localised area of exposed slate scree (22/079303).

Martin had a site for *Dryopteris aemula* on a roadside bank at a small hamlet called Cuffern. After checking out most of the ferns already mentioned plus some *Polypodium* x *mantoniae*, it was duly spotted by Martin at (12/893213), although it was very well camouflaged amongst the other vegetation and could easily be missed. Our final visit of the day was to Druidston near Broad Haven on the west coast (12/863170). Again *Asplenium obovatum* subsp. *lanceolatum* eluded us, but there were fine specimens of *A. adiantum-nigrum* amongst the usual roadside ferns, plus some *Equisetum arvense*.

On Sunday morning nine of us met at Lawrenny Quay (22/012062) in a light rain that was to continue all day. The quay is situated on the southern edge of a small promontory that extends into the Daugleddau River upstream from Milford Haven. We parked near the Quayside Teashop and entered woods through a small boatyard. A short distance into the wood our leaders gave cries of disbelief as we approached a pair of *Dryopteris affinis*. It had been their intention to demonstrate the subtle differences between subspecies *affinis* and *borreri*, however, the plants that had been earmarked two days earlier were now a sorry sight having been neatly stripped of nearly all their pinnae, presumably in some children's game! All was not lost, however, as there were plenty of other specimens in the vicinity to illuminate us, if not in such conveniently close proximity.

Moving forward into the dappled shade provided by a 'hanging wood' of contorted wind-blown oaks we noted many epiphytic polypodiums. One tree catching our eyes was supporting both *P. cambricum* and *P. interjectum* in profusion, and less commonly here, another had *P. vulgare*. The acidic nature of the soil was evident in the ground cover of *Calluna vulgaris*, *Luzula*

sylvatica, bilberry and the presence of *Blechnum spicant*. Drifts of dainty yellow cow-wheat and honeysuckle vines were characteristic of the warm, sheltered, acidic growing conditions. As well as the *Dryopteris*, *Blechnum* and *Polypodium* there were also the usual areas of *Pteridium aquilinum* and individual plants of *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. dilatata* and noticeably broad-fronded *Asplenium scolopendrium.* As we moved around the headland from a southerly to a more westerly aspect the *D. dilatata* became less common and we found the first plants of *D. aemula* that we had been seeking. This seemed to support the idea that *Luzula sylvatica*, *Calluna vulgaris* and honeysuckle can be indicators of a potential *D. aemula* site. Higher on the bank to our right there was an extensive colony of this greatly admired fern with fronds up to 40 centimetres in length (22/009068). After some photographic recording we retraced our route, spurred forward by the prospect of excellent mid-morning cakes and coffee.

Suitably refreshed, we drove a few miles east to Cresswell Quay (22/050067). The focus of our attention here was the abundant *Asplenium ceterach* growing in the old mortar of a stone wall adjacent to the road. Also on the wall were *Polypodium cambricum*, *P. interjectum*, *Asplenium trichomanes* subsp. *quadrivalens* and *A. ruta-muraria*. Availing ourselves of the stepping stones and low tide we crossed to the north bank of the Cresswell River, where a long stone wall and ruined buildings supported the previous ferns in even greater abundance. An oak wood beyond the wall contained *Dryopteris affinis* subspp. *affinis*, *cambrensis* and *borreri*, *D. filix-mas*, *D. dilatata*, *Asplenium scolopendrium* and *Pteridium aquilinum.*

Returning to the cars before the tide came in, we moved on some miles to a small car park near Blackpool Mill (22/058142), where we were shown a likely example of the hybrid buckler fern *Dryopteris* x *deweveri* that had spread to an area of nearly two square metres. It was intermediate in form to its parents, *D. carthusiana* and *D. dilatata*, both of which were growing nearby.

photo: M.H. Rickard

Fernery at Picton Castle Gardens, Pembrokeshire

Alison Paul, Sue Norman, Bruce Brown (*in front*),
Jonathan Crowe, Pat Acock, Roger Norman

Finally, we paid a visit to Picton Castle Gardens (22/010134), where, following a good lunch in the restaurant, we went out to explore the grounds. Proceeding through a formal avenue of rare trees and shrubs we entered the large walled garden, which mainly contained herbaceous plants and many hardy ferns including British varieties and foreign species. A large converted stone shed with a clear roof contained a fair collection of tender ferns, including a well grown specimen of *Blechnum fluviatile*. We then walked through the mature woodlands surrounding the castle. The dominant plant in much of this area was *Athyrium filix-femina*, which was looking its best at this time of year. Some of the clearings bordering the paths had been planted with a selection of many hardy ferns and varieties including a fine *Matteuccia orientalis*. Before departing we thanked Patrick and Martin for arranging such an interesting field meeting at such short notice.

NORTH-EASTERN USA – 'FEAST IN THE EAST' – 28 June - 8 July

Introduction — Pat Acock

Whilst on our highly successful tour of the Pacific North-West organised by Sue Olsen in 2003, I was sitting at dinner with John Scott. I could see that from time to time he was writing on his serviette. Suddenly he exclaimed, "Do you know, I could run a similar excursion based in Pennsylvania!" He then went on to explain the details. It sounded an excellent plan and I never turn down enthusiastic organisers of fern meetings in exotic settings. So began the long process of piecing together what turned out to be another triumphal meeting of the clan fern.

Many of us from Europe are fascinated by the ferns of North America. This comes about by reading about them in books but also in the way the history of the evolution of certain genera have been pieced together over time and especially in our life-times by people like Edgar Wherry, Herb Wagner and Stanley Walker. High on the list of favourites are the aspleniums, with the enigmatic *Asplenium rhizophyllum* at the Appalachian hub, and *Dryopteris*, including a subsection of our own European *Dryopteris*.

A mystery from our Seattle visit was debated endlessly then and on this excursion – why does *Polystichum munitum* grow so widely and prolifically in many habitats in the North-West and struggle in the North-East of the continent and why does *P. acrostichoides* luxuriate in the East and struggle in the West? Floras often divide the continent around the 100°W parallel into East and West with few plants stretching far from the east to the west and *vice versa*.

One can look at many books and listen to many authorities about the underlying geology and climate of a region but there is no substitute for going and experiencing it. I arrived a day late and had the afternoon to myself. Just walking in the woods opposite the hotel I was immediately aware of how different the conditions were to those back home. Discussions with our hosts and the two ecologists who joined us (Otto Heck and John DeMarrais) also started to bring home how different the conditions for growth were in Britain compared to the USA and why ferns from the USA are more able to grow in the gardens of Germany than in Britain.

Britain and Germany lie around the 52°N line of latitude and Pennsylvania around the 40°N line – much further south and equivalent to mid-Spain or the toe of Italy. The contrast in climate could not be more marked, with Pennsylvania having very hot summers with rain and high humidity and winters with regular snowfall and temperatures falling to -16°C. Geologically the areas have a real mix of underlying rock types resulting in a range of soil types. The USA also has a much more diverse flora, with plants not being forced into extinction by the ice ages as ours in Europe were. This was especially noted in the range of trees in the woodland and the many more species of ferns on the forest floor.

Day 1, 28th June – New Jersey Pine Barrens — Graham Ackers

Although there are nearly two dozen areas of Pine Barrens in NE America, the largest area by far is in the southern half of New Jersey, which we visited on our first day following a longish coach ride. There we collected Lindy Kelly, a freelance guide who works for several conservation groups. Ecologically, the Pine Barrens have some extremely interesting features – very porous sandy and gravelly acidic soils, a continental climate with cold winters and very hot summers, which we were to experience, considerable dryness in summer resulting historically at least in summer burns, adaptation to these burns by the vegetation – pines, chiefly *Pinus rigida*, oaks, many typically dwarf, and a multitude of woody/shrubby ericaceous species. Within an apparent uniformity of landscape lie several different habitats, including swamps, with Webb's Mill Bog being our first stop. What a beautiful place! A glorious colourful wildflower spectacle included two species of orchid, *Arethusa bulbosa* and *Calopogon pulchellus*, and the bladderwort *Utricularia cornuta*. There were two other bladderwort species present and the silver/yellow blooms of golden crest, *Lophiola aurea*. The flora here was indeed very rich and interesting e.g. three species

of *Drosera*, but the main pteridological interest was provided by the tiny curly-grassy stands of *Schizaea pusilla* and the lycopods *Lycopodiella caroliniana* and *L. appressa*.

With the heat of the day increasing, our next stop was in the Warren Grove Recreation area, which consisted of tundra-like vegetation of considerable interest. However, to seek ferns we were obliged to enter taller and denser understorey vegetation, a potentially hazardous venture in view of the ever-present risk of the ticks carrying Lyme Disease. Despite our bravery, only bracken, *Pteridium aquilinum* subsp. *latiusculum* was found. As in many other areas worldwide, bracken here is typically subservient to other vegetation, not forming the all-invasive stands typical of upland areas in Britain.

We lunched at tables within the welcome shade of a rustic shelter overlooking the picturesque Pakim Pond. Following a tasty picnic feast, we walked some way around the pond, discovering some more *Schizaea pusilla* as well as *Lycopodiella alopecuroides*, bracken, a few plants of *Osmunda cinnamomea* and, perhaps of greatest interest at this point, a good number of fronds of the creeping *Woodwardia virginica* within a small shaded area of swamp. The latter three species were also present at our next stop, a small roadside swamp. However, the main interest here was the damp-loving *Thelypteris simulata*, rarely seen during the rest of the trip. It looks very similar to *T. palustris*, but can be distinguished by the fact that its side pinnule veins do not branch before reaching the pinnule margin.

Most of our sites were within the Brendan T. Byrne State Forest, and our next stop was the Forest Office to collect some leaflets and books. One that I can particularly recommend is *A Field Guide to the Pine Barrens of New Jersey* by Howard P. Boyd, published by Plexus Publishing in 1991.

Following another short roadside stop with no ferns, we arrived at the Historic Whitesbog Village site. With a height of activity towards the end of the 18th century and the first half of the 19th century, the New Jersey Pine Barrens had supported a number of rural industries such as lumbering, the operation of grist-mills and production of charcoal. (Our first site Webb's Mill Bog was created in the aftermath of charcoal burning activities and the mining of so-called bog iron 'ore', etc.) Important agricultural activities that still survive and thrive are the growing of cranberries and blueberries. The centre of activity for blueberry production is Whitesbog Village, this now deserted village being the only surviving example of numerous small villages built around the various rural industries. By the time we arrived, the buildings, which are opened to the public, had closed, but we managed to record on the site nine pteridophytes, only one of which (*Osmunda cinnamomea*) we had seen earlier. The new ones were *Ophioglossum pusillum*, *Botrychium virginianum*, *B. matricariifolium*, *Equisetum arvense*, *Osmunda regalis* var. *spectabilis*, *Onoclea sensibilis* and *Asplenium platyneuron*. Many of these were to become 'old friends' in the days to come!

Day 2, 29th June – Springwood, Winterthur and WynEden **Pat Acock**

On the coach bound for Springwood in the Brandywine Valley, south-east of Philadelphia, Naud Burnett, travelling with his wife Wim, gave out his fern catalogue (Casa Flora) to entertain us. Their nursery produces over fifteen million ferns a year, many of them familiar to our members.

At our first garden, Dick Lighty, retired director of Mount Cuba Preserve, introduced his wife and mentioned how for twenty years they had built up the garden with many fern, shrub and tree plantings influenced by his early visits to Korea. In this beautiful garden set in woodland we were able to refresh our memories on Eastern States *Dryopteris* and other ferns as well as to be introduced to many unusual ferns. Among the earliest gems we saw in swathes was a Korean fern, *Deparia conilii*; my own favourite was *Polystichum tripteron*. Exciting to Naud and to John Scott were a variety of sports of *Athyrium niponicum* and possible hybrids with *A. otophorum* that were scattered around the house.

At the more public gardens at Winterthur we were able to see large quantities of eastern U.S. ferns including *Dennstaedtia punctilobula*, *Matteuccia struthiopteris*, *Deparia acrostichoides* and *Thelypteris noveboracensis*. Although not on the list, I was pleased to see *Asplenium platyneuron*. Many of the walls suitable for spleenworts were covered in *Corydalis cheilanthifolia* but even though they were not in flower they never fooled any of us. After the fern tour we split into two groups; one group looked at the very fine collection of furniture and ceramics, whilst the other went to the library where the best of the books were Eaton's 'Ferns of North America' and Catesby's 'The Natural History of Carolina, Florida and the Bahamas'.

Our final trip of the day was to WynEden, Wayne and Doris Guymon's garden. Wayne had been a professor of a scientific branch of linguistics but later worked for Merrill Lynch and travelled weekly to London and visited many English gardens, his favourite being Savill Garden in Windsor Great Park. These visits had influenced his landscaping, where he was using thousands of plants, predominantly hostas, to create swathes of texture and colours. Over seventy species of ferns were on display within this beautiful garden centred around two large lakes.

Day 3, 30th June – Thyrum's Garden, Mount Cuba, F.M. Mooberry's Garden and Longwood Gardens **Alan Ogden**

Thursday was a 'Garden Day'. We were spared the usual early start for we only had a short drive into Delaware to what we were told was a small house and garden, the home of Eve and Per Thyrum at 19 Crestfield Road, Wilmington. They greeted us and Eve gave a brief introduction and explained how the property had developed over the years.

They arrived in 1980 and began their garden. In about 1985 they built a large extension, a glass kitchen, and planted many trees so that now the garden was becoming very shady, favouring the growth of ferns and hostas. We were very grateful for the trees, as it was another very hot and humid day. Eve explained that they enjoyed enhancing their garden with many unusual and artistic sculptures, rocks and water features, many built by Per. We were impressed by the healthy hostas, which seemed unblemished by slugs and snails unlike those back home. Many familiar ferns were growing in the garden, including a huge *Dryopteris* x *australis*, *Athyrium filix-femina* var. *angustum* 'Lady in Red' looking good and a 'haunting' of *Athyrium* x 'Ghost'. Varied habitats had been created – a desert garden with *Cheilanthes* among the agaves, a summerhouse by the pool and behind it a ferny glade with osmundas, *Onoclea* and a giant *Dryopteris goldiana* beneath some huge black bamboos. There was a small formal garden with clipped box and many unusual and attractive garden ornaments.

We settled down for lunch beneath the trees and Per used a golf buggy to bring the boxes and drinks from the coach. This is a 'small' garden? The ambience was delightful, there were no troublesome insects and it was nice to see some friends from the British Isles, *Athyrium filix-femina* 'Frizelliae' among others. It would have been lovely to stay but we had to set off for our next garden. Thanks to Eve and Per who were perfect hosts.

Less than half an hour away was Mount Cuba, Greenville, Delaware, which was previously the home of Mr Copeland, the last of the DuPont family to be C.E.O. of the company. We were received by Emmett Jacobs, who gave us a brief slide-show to illustrate the history of the house and gardens. The reason for the strange name of the house has been forgotten. Mrs Copeland was a founder of the organisation to conserve and develop Appalachian Piedmont native plants. The house was built in the colonial style and the reception rooms are now a conference centre. The first landscaping was in 1950 and the lower garden and four ponds were made in 1960. Dr Richard Lighty, whom we visited the previous day, was the first director. Emmett explained the geographical region that they covered and how the estate had grown from 36 to 630 acres. A database is being developed using computers and GPS to record the exact location of plants. Plants are studied to find more garden-friendly cultivars and methods of propagation to make them more easily available but no plants are sold from the estate.

We then had a guided tour of the most impressive gardens by Barbara Aldinger, who certainly knows her plants. We didn't meet any new ferns but it was strange to see Adiantum capillus-veneris growing so well out of doors. There were many flowering plants new to me, which would probably grow well in the British Isles. We ended our walk down by the large pools where the frogs croaked and the turtles sunbathed. From there it was a hot slow walk back to our transport at the top of the hill. Thank goodness for the cold drinks and air-conditioning on the coach. (Go to www.mtcubacenter.org for more information.)

Next we were welcomed to 'Spottswood', where F.M. Mooberry gardens only with North-east American plants. We were made very welcome and given a tour that took in a bog garden with cranberry and pitcher plants, fed by a stream from a pond with the usual resident croaking frog. F.M. has many unusual plants and obviously gardens with enthusiasm but I do not think we met any new ferns. Like so many gardeners in this area she has to make special arrangements to keep out the deer. After cold drinks in the porch we set off again – another short trip to Longwood Gardens in Pennsylvania.

Longwood is a huge public garden, which now encompasses 1,050 acres of gardens, woods and meadows. There are four acres of greenhouses where we could wander as we wished until we stopped for dinner in the restaurant prior to the famed display of fountains, light and music. I particularly enjoyed the conservatory with its display of tall thin tree-ferns all grown in pots. Martin Rickard identified these as *Cyathea cooperi*. There was a fern house with some huge *Angiopteris* and some varieties of *Asplenium nidus* 'Avis' that were new to most of us. The waterlilies outside were spectacular. (More information at www.longwoodgardens.org.)

The dinner in the cafeteria was exceptional for the sparkling conversation, perhaps enhanced by the wine, whilst we waited for the display to begin. We were not disappointed by the fountains, which were lit by the original colours put in when the exhibition was conceived. The faithful coach was waiting as we trooped out of the garden to take us back to Concordville and a welcome bed.

photo: A.H. Ogden

Christian & Margit Kohout in the fernery at Longwood Gardens, Pennsylvania

Day 4, 1st July – Ridley Creek, Barnes Foundation, Henry Foundation and Chanticleer Gardens **Martin Rickard**

Our first stop was at a remarkably unferny spot by the side of the Ridley Creek, near Philadelphia. We scrambled down a muddy slope to the waterside to admire *Marsilea quadrifolia* growing in the shallows. This was the only time we saw this remarkable fern wild during the week, although John Scott told us it had initially been introduced. We later saw it well established in several gardens, just to add to the frustration of those of us who have failed to grow it out of doors in England.

We soon moved on to the arboretum at the Barnes Foundation, set in a residential area on the outskirts of Philadelphia. Our driver had some problems because buses were banned in the locality, however, he dropped us off not too far from our destination. The Barnes Foundation is primarily an art collection and the resultant security on the site was obvious. Apparently Dr Barnes collected art but when he took over the property in 1922 he inherited an arboretum set up in the 1880s by a Capt. Wilson. Dr Barnes was not apparently much interested in the young arboretum and entrusted its development to his wife, Laura.

As part of the development of the site a large fern collection was planted in a damp corner of the woodland. I am not sure if this was looked after by Dr Wherry or whether he had occasional input, but the most interesting plants at the site seemed to be down to him. For me these were the wonderful cultivars of *Polystichum acrostichoides*. One, 'Crispum', is crisped and serrate and the other, 'Multifidum', could probably be best described as bipinnate. Deep in the woodland around a pool near a 'Tea House' the ferns were most abundant, planted in patches of one particular taxon. Sadly they were getting a little overgrown. Nothing that could not be sorted except that the area concerned is large and available garden staff are few (a job for security in their spare time?!). Our group had a wonderful time wandering around discussing the correct naming of everything we saw – including many of the wonderful trees of the arboretum.

We were not allowed long to explore the arboretum and were soon herded back to the bus to be whisked off to our next stop – The Henry Foundation for Botanical Research. By this time the heat was becoming almost unbearable (high 90s°F with very high humidity). The Henry Foundation originated in the 1920s. Mary Henry collected plants from all over North America, building up an extensive collection of native species (not particularly ferns). Before her death she set up a foundation to ensure the continuation of the collection. In this she was very successful because since her death in 1967 the collection has been ably maintained by her daughter, Josephine. Before lunch we were introduced to the terrain around the centre, a huge rock pile, completely natural but planted with introduced plants from elsewhere in the Americas. Unintroduced, amongst the rocks we were delighted to find two fern species – *Woodsia obtusa* and *Asplenium platyneuron*.

There was no shelter from the sun amongst the rocks, so it was with considerable relief that we were invited into the cool of the house for our delicious box lunch, as usual organised by Margaret Scott, thank you Margaret! After lunch we explored further afield into woodland areas of the foundation. We were shown a *Cystopteris* among stones under the road, was it *C. protrusa* or *C. tenuis*?! As it was creeping amongst rocks, i.e. with a creeping rhizome, *C. protrusa* was the probable answer. The highlight for me here was once again the two cultivars of *Polystichum acrostichoides* that we had seen in the morning. John Scott told us that these too were planted by Dr Wherry. I would love to see both these cultivars introduced to British gardens. They go part of the way to destroy the myth that fern cultivars are a British speciality. In my opinion fern cultivars are rare but scattered more or less evenly wherever ferns grow. The only reason we have so many in Britain is that we have looked! In Victorian times cultivar hunting was very popular, not so in the USA. The first fern book there was not published until 1878 (John Williamson's *Ferns of Kentucky*).

It was soon time to move on again. This time to Chanticleer, one of those typically American gardens – absolutely immaculate! On arrival the heat and humidity were still dreadful but after a quick look in the public rooms of the house we moved off to tour the large garden. Down in the valley some way from the house ferns were well represented, scattered through a large woodland area. The fern collection here was much as we had seen elsewhere but the setting was superb. Every species looked in fine fettle and it got me wondering why plants that we think of as waterside plants do so well in dry areas under trees in America. In particular, *Onoclea sensibilis* and *Matteuccia pensylvanica* crop up almost anywhere. All

the time we were exploring the garden clouds were building up and rumbles of thunder were audible and we were a long way from the coach so exploration was cut short as we hurried back to the bus, passing on the way an interesting mock ruin – ideal for wall ferns in a decade or two.

Day 5, 2nd July – Jerry and Joan Hudgens' Garden and Susquehanna State Park

Peter Tindley

We arrived at 'Fern Dell' and were welcomed by Jerry and Joan Hudgens, the owners. The garden occupies four and a half acres of a southerly sloping wood, which provides plenty of shade despite its aspect. First of all Jerry provided us with refreshments whilst giving out several pages of a list of the ferns planted in the garden. Jerry gave us a guided tour of the garden, which had been developed over twenty to twenty-five years from a wild state. Native genera present were *Asarum*, *Trillium*, *Viburnum* and *Rhododendron*.

Many of the ferns in the garden were fairly small, having been recently planted. There was a good *Lygodium japonicum* in a pot at the base of the veranda. The plant had to be taken in during the winter. Martin Rickard spotted *Asplenium platyneuron*. *Adiantum pedatum* and *Phegopteris hexagonoptera* were said to be indigenous to the area and were doing well here. Pat Acock noticed a small plant of *Lygodium palmatum* that seemed to be doing well, although Jerry had had difficulty growing it. Jerry mentioned that there was a lot of variation in *Polystichum acrostichoides* in the garden. There was a very fine specimen of *Athyrium filix-femina* var. *angustum* 'Lady in Red', a new variety to me. *Pyrrosia lingua* and *Pellaea* were being tried outside. Near the bottom stream there was a fine stand of *Deparia acrostichoides* and *Asplenium scolopendrium* var. *americanum*, which John Scott and Jerry have had difficulty growing. Not far away was a good clump of *Selaginella braunii*. There was also some *Asplenium rhizophyllum*. John pointed out the grape ferns *Botrychium dissectum* and *B. virginianum*. Further up the garden was *Lycopodium lucidulum* showing fruiting spikes. Nearby was *L. obscurum*. At this stage we were joined by John DeMarrais and Otto Heck. Martin commented on a fine plant of *Dryopteris bissetiana*. Heading up to the house was a wonderful patch of *Selaginella uncinata* with a very bluish tinge.

After a very fine lunch provided by our hosts, John Scott showed us an orchid, *Liparis liliifolia*. I saw a plant of *Adiantum pedatum* 'Eco Aurora-borealis'. To me it could have been *Adiantum pedatum* 'Miss Sharples'. Naud Burnett said that this plant had paler tips to the leaves.

We then travelled to Susquehanna State Park, the coach stopping at Rock Run Mill, where *Woodsia obtusa* grew on a very shady wall. Alongside this large colony was a single plant of *Cystopteris tenuis*. John said he wanted to show us *Dryopteris celsa* and its hybrid with *D. marginalis*, *D.* x *leedsii*. A few hundred yards down the road we found three good hybrids, characterised by the sori being further from the pinnule midribs compared to the parent *D. celsa*. The hybrid and parent caused much debate.

Thanks to the kind hospitality of Jerry and Joan, this was another fulfilling day in which we came to a better understanding of the North American *Dryopteris* complex.

Day 6, 3rd July – Lancaster County **Martin Rickard & Alan Ogden**

This was a special day. John had enlisted the help of a local naturalist, Tim Draude, to show us some treasures in the wild. In the morning we set off south, eventually crossing the Susquehanna River, I believe also crossing over into Maryland.

Eventually we parked near the western bank of the Susquehanna at Lock 12 Historic Area, York County, Pennsylvania, and were led off into woodland by Tim. Almost immediately we dropped into a small ravine to be shown a wonderful population of aspleniums – *Asplenium* (*Camptosorus*) *rhizophyllum*, *A. montanum* and their fertile hybrid *A.* x *pinnatifidum*. The two parents are quite common but the hybrid less so. To the visiting Brits all three taxa

were a great excitement, which grew when we were shown yet another hybrid on the same rock. This was *A.* x *trudellii* the rare backcross hybrid between A. x *pinnatifidum* and *A. montanum*. The existence of this hybrid suggested that here A. x *pinnatifidum* was the fertile tetraploid form. It was a real privilege to see this wonderful site.

Looking down deeper into the ravine one or two of us wondered if there might be some *Trichomanes* gametophyte. We had a quick look but could not see any. We moved only a few yards up the small stream that formed the ravine, passing several botrychiums, and after perhaps 100 yards we came across a north-facing cliff overhanging the shallow water. Torches were out, investigating deep into the cliff's recesses and a small piece of fern gametophyte was discovered. Not *Trichomanes* but a species of *Vittaria* unknown here in the sporophyte generation – *V. appalachiana*. Were it not for the fact that we are mostly all convinced about the widely distributed gametophytes of *Trichomanes speciosum* in the UK, this story would have been hard to believe.

After this excitement we moved a short distance to Pecque Creek, where, wandering along the side of the narrow road, we came across more *Asplenium rhizophyllum* on a boulder, and masses of *Cystopteris*. Quite common was *Cystopteris bulbifera*, but curiously its fertile hybrid with *C. protrusa* (*C. tennesseensis*) was more common. The bulbils are less plentiful on the hybrid yet it seems to be a very successful taxon. In the field it is split from *C. bulbifera* by its broader, more triangular and fresher green fronds, lacking the long attenuate lamina of *C. bulbifera*. *C. tenuis*, with its short creeping rhizome, was also present.

We moved on for a packed lunch in Lancaster County Central Park. After lunch Tim led us off across mown grass into woodland with some precipitous, fairly sunny cliffs. Here we were delighted to see some large plants of *Pellaea atropurpurea* in the rock crevices and on ledges, along with *Asplenium platyneuron* and *A. rhizophyllum*. Moving down the woodland to the road at the bottom we saw very few ferns apart from *Polystichum acrostichoides*. By the roadside, above the Conestoga River we were surprised to see naturalised *Athyrium niponicum* 'Pictum' and some nice stands of *Adiantum pedatum*. We walked back along the road to be eventually met by the bus; I do not think many of us had relished the idea of climbing up that bank again in the heat!

After that we went to Mill Creek, where at the edge of a wet meadow on the woodland edge we saw the comparatively rare *Dryopteris clintoniana* along with *D. goldiana*.

Day 7, 4th July – Gring's Mill and The Rockland Botanical Garden **Naud Burnett**

This American writer had mixed emotions about our celebrating Independence Day, July 4th, for fear of offending our wonderful British fern companions.

First on our agenda was a visit to one of Berks County Park and Recreation Department's parks, Gring's Mill at Tulpehocken Creek. *Pellaea atropurpurea* and *P. glabella* were growing abundantly in the mortar joints of a bridge spanning the creek. Important to the Brits were *Asplenium trichomanes* and the discovery by Christian Kohout of what may be an American station for *Asplenium trichomanes* subsp. *hastatum*. Pat Acock was kept busy as usual climbing over boulder walls looking for yet another fern. We enjoyed a packed lunch here as well as a walk through the surrounding forest.

On the way from here to John and Margaret Scott's garden the bus stopped so we could look at ferns and fern allies growing along a roadside nearby. Found in full sun were *Equisetum arvense*, *Dryopteris marginalis*, *Thelypteris palustris*, *T. noveboracensis* and *Onoclea sensibilis*. Growing in the shade were *Cystopteris tenuis*, *Asplenium platyneuron*, *Woodsia obtusa*, *Dryopteris marginalis*, *Athyrium filix-femina* var. *angustum*, *Polystichum acrostichoides*, *Dryopteris* x *uliginosa* (*D. carthusiana* x *D. cristata*) and *Dennstaedtia punctilobula*. John also pointed out *Phegopteris hexagonoptera*.

We went to the Scott's Garden, the Rockland Botanical Garden in Berks County, where we were refreshed with tea and lemonade. The garden consists of 13 acres – nine acres of wet woodland that had been lumbered in 1968, two acres of woodland that took over an old cornfield, and a two-acre mature conifer collection surrounding the house. Some of John's collection of 272 fern taxa are organised in the rock garden beds in front of the conifers in partial shade and many more are grouped along the path edges in the forest. A collection of *Polystichum acrostichoides* and a large collection of 29 named cultivars of *Athyrium niponicum* were very interesting. The latter collection includes all of those currently available and some older varieties, as well as several unnamed ones. Most notable were dwarf green and grey forms from Mrs Barnes, 'Wildwood Wonder', 'Wildwood Ancient Jade', 'Ursula's Red', 'Branford Rambler', 'Red Beauty', several crested ones including 'Reggie's dwarf', and hybrids such as *Athyrium* x 'Branford Beauty' and *A.* x 'Ghost'. It was clear that many cultivars did not look like the photographic advertisements in sales literature in the trade, the bright leaf colours of spring having bleached out to nothing special by July 4th.

Found in the rock garden were *Woodsia ilvensis*, *W. plummerae*, *W. obtusa*, *Cheilanthes lanosa*, *Diplazium pycnocarpon*, a collection of eastern North American *Athyrium filix-femina* cultivars and eight forms of *Polystichum acrostichoides* with ruffled broad pinnae, crested tips or incised pinnae.

The woodland collection of trees and other plants were the result of 25 years of natural reforestation represented by six types of dicots. Among the trees and native shrubs were magnolia, tulip tree, poplar, spicebush, maple, gum, smilax and ilex. A natural walk in this forest meandered through luxuriant foliage of native herbaceous plants as well as abundant stands of poison ivy, which we tip-toed around to avoid getting sap on our shoes. The following ferns were seen: *Onoclea sensibilis* (red-stemmed form), several forms of *Osmunda regalis*, *Dennstaedtia punctilobula*, *Athyrium filix-femina*, *A. otophorum*, *Diplazium pycnocarpon*, *Dryopteris carthusiana*, *D. celsa*, *D.* x *boottii*, *D.* x *triploidea*, *D. goldiana*, *D.* x *leedsii*, *D. dilatata*, *D. intermedia*, *D. filix-mas* 'Barnesii', *D. remota*, *D. filix-mas* (John Mickel's), numerous forms of *Polypodium*, *Botrychium* (five species), several species of *Lycopodium*, *Thelypteris noveboracensis*, *Phegopteris connectilis*, *P. hexagonoptera*, *Selaginella apoda*, *Adiantum pedatum* and *Polystichum setiferum* 'Herrenhausen'.

The herbaceous perennial plants were too numerous to list but among the more important ones were 25 species of *Trillium*, lily of the valley, showy orchids, Indian pipe, *Sasparilla*, *Arisaema*, *Thalictrum* and *Smilax*.

Before dinner several members disappeared into John's extensive natural history library in the basement. Notable were the complete runs of Clute's *Fern Bulletin* and the *American Fern Journal*, numerous reprints and over 300 fern books. John demonstrated his fern citation database with over 8,400 entries. We all appreciated the Scotts sharing their garden with us and also the delicious dinner.

Day 8, 5th July – Nescopeck State Park and Delaware Water Gap **Pat Acock**

On Tuesday morning we set off on the short journey to Nescopeck State Park, which was not signposted. Once we finally found the park entrance, the roads inside the park were very well signposted. We were given a guide to ferns and their allies by Environmental Education Specialist, Diane Madl, who also accompanied us along the trail. The woods were awash with ferns. At the woodland edge, climbing up the grasses and into the low shrubs, was the Hartford Fern, *Lygodium palmatum*. For the next 400 yards or so it was everywhere and what a delight it was. As the trail gave way to drier ground Martin Rickard was able to discern *Dryopteris* x *triploidea* amongst a group of *D. intermedia*.

After a superb salad lunch at JRs, Otto Heck and John DeMarrais joined us again in the Delaware Water Gap for a good walk up the Dunfield Creek Trail. Here we were able to get

our eye in again for botrychiums. We saw *Botrychium virginianum*, *B. dissectum* and, just emerging, *B. oneidense*. Earlier in the season, *Phegopteris connectilis* had been washed away from the trail-side during a storm, but Martin found a drift of it nearby and so it was restored to the list.

Few wanted another walk, so the hardy ones climbed up rapidly to 400 feet in about fifteen minutes to be rewarded by a wonderful view of the river and cliffs as well as *Woodsia ilvensis*, *W. obtusa*, *Asplenium platyneuron*, *A. trichomanes* subsp. *trichomanes* and *Pellaea atropurpurea*, as well as seeing in the wild a beautiful fern that is often cultivated, *Cheilanthes lanosa*. On the way down a polypod looked different from the *Polypodium virginianum* we had got to know, and we were assured it was *P. appalachianum*.

Day 9, 6th July – Bartholomew's Cobble, Innisfree Garden and Cary Arboretum

Graham Ackers

The coach journey to our first site of the day involved clipping the NW corner of Connecticut and travelling just over the State border into Sheffield, Massachusetts. Bartholomew's Cobble is a trustee-run nature reserve covering 329 acres, the main area of which consists of open fields dotted with red cedars, *Juniperus virginiana*, and forest. However, at the heart of the reserve, adjacent to the well-appointed and informative Visitor Centre, is an area of unusually fashioned rounded bedrock, being a rocky hill or knoll consisting of limestone, marble and quartzite. This is the 'Cobble', the word not having its usual meaning of a 'large pebble', but believed to have come from the German word *kobel* or *koble* meaning rocks. This basic substrate is a haven for pteridophytes, and the reserve's pteridophyte list for the whole site consists of 54 species.

As time was limited, we restricted ourselves mainly to the Cobble area, walking along the Ledges Interpretive Trail, for which a good guide booklet was available. Sarah, the reserve's Property Manager, with whom we swapped snippets of ferny information, accompanied us. Of the ferns listed, we managed to spot 31 taxa, many if not most of which we had seen at other sites, perhaps not, however, in such profusion. Highlights from the list were the significant patches of the walking fern (*Asplenium rhizophyllum*), *Dryopteris* x *triploidea* (*D. carthusiana* x *D. intermedia*), and the gametophytes of *Trichomanes intricatum*, cryptically residing in dark damp rock crevices. Party members also spotted two taxa not on the reserve's list – the hybrid *Cystopteris* x *illinoensis* (*C. bulbifera* x *C. tenuis*) and *Equisetum pratense*. Historically the reserve had been well known for having Scott's spleenwort *Asplenium ebenoides* (*A. platyneuron* x *A. rhizophyllum*), but this was not found by us and sadly has not been seen by anyone in recent times.

Our first afternoon visit was to Innisfree Garden in Millbrook, New York. Originally a large private garden, it became a foundation in 1960 when it was opened to the public. Based on Eastern design concepts, this landscape garden makes much use of stonework and contains interesting features such as waterfalls, fountains, grottos and sculptures. The central feature is a large lake, fringed with blooming pickerelweed (*Pontederia cordata*), and close by were various boggy areas with a profusion of plants. I noted 18 pteridophyte taxa, although the garden is by no means 'fern focused'! The highlight perhaps was a fine specimen of the cultivar *Athyrium* x **'Branford Beauty'**.

On her death in 1967, Mary Flagler Cary left her Arboretum at Millbrook, New York in trust, and by 1983 the Institute of Ecosystems Studies was created on the site for research and educational purposes. Within this large 2,000-acre site is the small Fern Glen, which was our final site for the day. We were guided there by the lively Judith Sullivan, who told us that John Mickel designed the Glen, originally as a fern hardiness testing area. Subsequently, however, its focus changed to being a garden devoted to the preservation and enjoyment of native ferns occurring naturally within a 50-mile radius of the Glen. As such,

'exotics' are being eradicated. The area consists of paths and boardwalks through a variety of habitats including a pond, swamp, fen, cobble and forest. A bed close to the pond contains the greatest variety of ferns, shaded by netting since a 1992 tornado obliterated the previous tree cover. We recorded 26 pteridophytes in all, perhaps most striking being fine large plants of the swamp-loving *Osmunda cinnamomea*, *O. regalis* var. *spectabilis*, *Onoclea sensibilis*, *Matteuccia struthiopteris* and *Athyrium filix-femina* were also present.

Day 10, 7th July – John and Carol Mickel's Garden, Lyndhurst and Leonard J. Buck's Garden

Martin Rickard

I had been looking forward to today's first visit for months. We were off to see John and Carol Mickel's garden at Briarcliff Manor near Ossining, about 20 miles north of New York and about one mile from the Hudson River. I had been a few years previously and knew it was something special. If anything my only trepidation was that maybe the garden was not as good as I remembered. I need not have worried! Every plant here is beautifully grown. John has an arrangement whereby suitable mulching material is delivered in bulk to about five yards from the nearest fern border. The rewards from taking trouble with the soil were obvious. Obvious enough to make me jealous!

I would guess the garden covers about an acre. The main fern areas are on the shady slope where the land drops away behind the house into a natural valley. There is an ornamental pool at the bottom. This part of Ossining is very much a leafy suburb with large gardens, which unfortunately make it ideal country for deer, which can damage some of the ferns. At the time of our visit damage was hard to spot.

photo: P.J. Acock

John Mickel points out some interesting ferns among hostas in his garden in Ossining, New York

Many ferns here were worthy of note. *Deparia conilii* is a small clump-forming fern from Korea with erect sporing fronds and spreading sterile fronds, a pretty little fern new to most of us this week (we had seen it earlier in Dr Lighty's garden). *Dryopteris ludoviciana*, with

its beautiful glossy green fronds, curiously mimics *Polystichum acrostichoides* in having sporing pinnae reduced in size towards the tips of the fronds. Why do both species do this? It is odd that they both grow in the same geographic region. *Arachniodes miqueliana* (wouldn't *mickeliana* have been appropriate!) is one of those ferns I dismiss as ungrowable, but here in Ossining, with its large triangular fronds, it is stunning. *Dryopteris monticola* is another fascinating species. I have heard it said that it is simply an Asian form of *D. goldiana*, but seeing it here it is clearly different although the two species do look to be closely related. *Cyrtomium falcatum* var. *litorale* is new to me. It is a very nice compact form apparently more hardy than the normal species. *Diplazium squamigerum* is a triangular-fronded fern, common enough in Japan etc. but very rarely met with in the west. *Blechnum nipponicum* with its beautiful new fronds flushed red is magnificent here, and I mean magnificent. I have grown this in the UK but it has dwindled and died. *Dryopteris hondoensis* with its rather more open fronds, also from Japan, thrives. I could go on for ever, there are so many unusual ferns here, many of which do not appear to grow in Britain. John is in US hardiness zone six, much colder than anywhere in England, so why the discrepancy? After much discussion while travelling on the coach we came to the conclusion that we do not have enough summer heat to stimulate sufficient growth annually for the plants to survive the winter. Either that or the stop/start nature of our springs are lethal.

photo: P.J. Acock

'Feast in the East' group at John & Carol Mickel's home, Ossining, New York

Back: Pat Acock, Alice Bagwell, Peter Tindley, Naud Burnett
Middle: Carol Mickel, Christian & Margit Kohout, Sue Olsen, Bob Bagwell, John Mickel, Alan Ogden, John Scott
Front: Graham Ackers, Wim Burnett, Martin Rickard

It was taking ages to do this garden any sort of justice, and unfortunately our time was tight. Many of us were so beguiled by the garden that we almost missed out on the delicious

refreshments laid on in the house by Carol, but we made it! I wonder how many of John and Carol's bits and pieces decorated with ferns were noticed. Their collection, scattered all around the house, was mind-blowing. It runs to mugs, plates, napkins, curtains, mats, pictures, jugs, vases, towels, tea towels, etc., etc.

No one wanted to leave here, John and Carol had been such wonderful hosts, but we all reluctantly climbed back on the bus to travel the short distance to Lyndhurst.

At Lyndhurst, still in New York State, we partook of a marvellous box lunch prepared by the Lyndhurst caterer before rushing off to the fern garden. This is by the side of the main entrance drive and consists of a series of raised beds each surrounded by largish stones. Within each bed the local fern growers had amassed an excellent collection. Highlights for me here were some of the fascinating *Dryopteris* hybrids, including *D.* x *boottii*. This is sometimes seen for sale in the UK but never correctly so far as I can see. We were shown around by Gray Williams, who very patiently fielded our many questions.

After a shortish stay at Lyndhurst we set off on quite a long drive to the Leonard J. Buck garden in New Jersey. Here is housed half of the F. Gordon Foster fern collection (the other half is at the New York Botanical Garden). We were shown around, armed with the list of ferns in the garden. Many were species native to the north-eastern states, notably *Marsilea quadrifolia* in the pool (near a large black snake that quietly slithered off as we arrived!), *Thelypteris noveboracensis*, *Woodwardia areolata* and of particular interest to me was a large stand of crested *Deparia acrostichoides*. I am hoping we can find out if this attractive fern is hardy in Britain.

Name changes and species splitting is not unique to Europe. Readers may be interested to know that '*Polypodium vulgare*' in the US has over the years been split into a handful of different species, none of them now called *P. vulgare*! Initially all polypodies in the east were assigned to *P. virginianum* but this too has been recently split into two with the new species called *P. appalachianum*. Our visit was quite soon on the heels of the change and each clump of polypody was discussed much as would happen in the UK. This all added to the fun and we ended up putting all the Buck Garden material we saw into *P. appalachianum*. The only *P. virginianum* I remember seeing on the whole trip was among the rocks on the climb up to see *Woodsia ilvensis* at the Delaware Gap.

Day 11, 8th July – Bowman Hill and Jack and Rose Marie Schieber's Garden Sue Olsen

Our final day arrived all too quickly, with Bowman Hill Preserve and its Wherry Fern Trail in Pennsylvania our first stop of the morning. As per visits at previous sites, local specialists, Jack Schieber, John DeMarrais and Otto Heck had kindly scouted and done an inventory of the ferns on the property and presented us with a checklist of the ferns in the collection.

The Preserve itself was established in 1934 with a long-term goal of presenting and preserving the wildflowers and ferns of Pennsylvania in their varied natural habitats on the property. The soils, rocks and exposures offer a representative sampling of those of the state as a whole and consequently offer an ideal terrain for the collection of some 800 of the state's 2,000 native plants. Dr Edgar Wherry, teacher and author, was instrumental in establishing the Preserve and he and his students planted a trail of native ferns along the varied terrain of twenty acres of woodland. A canopy of hemlock and understorey of rhododendron are dominant woodlanders and part of 80 acres enclosed by the requisite deer fence.

Hildy Ellis, who is the Education Coordinator at the preserve, greeted us in good cheer especially considering that we were also met by an incredible eastern U.S. downpour. Hildy guided us along a wildflower walk down to the fern trail. Fortunately the ferns along the trail were by now basically familiar natives, Wherry's specialities. It was not long before everyone was quite ready to return to the comfortable and dry visitor's centre and gift shop.

Meanwhile, while we were enduring rain as opposed to the up-till-now ever present heat and humidity, Rose Marie Schieber was preparing a luncheon feast for us all. She and Jack garden in Holland, Pennsylvania. What a pleasure it was to sit in their sunroom, surrounded by garden vistas, flocks of visitors to their bird feeders and best of all, good friends.

The rain relented a bit and the well-fed faithful eagerly joined Jack for a tour of their collection. Even before leaving the house, we were impressed by a statuesque specimen of *Dryopteris* x *complexa* standing as a sentinel in the foreground of a primary bed. The tour introduced us to a collection of fellow *Dryopteris* cultivars, including an attractive *D. filix-mas* 'Parsley' and a robust *D. affinis* 'Revolvens'. We admired and photographed the native *Dryopteris* hybrids especially *D.* x *leedsii*. But there is much more than their *Dryopteris* collection and we were especially impressed by a magnificent planting of *Polystichum braunii*. In addition to and amongst the robust *Dryopteris* collection, the Schieber's have a lusty little *Woodsia scopulina* subsp. *appalachiana*. This attractive and rare dwarf was a 'new to us' find. Ah, but then came the questions about scales, hairs and the botanical nuances of identification. Since then, Jack has done some research and has confirmed the identification. It was a treat to be introduced to this unusual mound of small, soft and cold-hardy foliage. I'll confess that this was not my first visit here and I continue to be impressed and delighted with a vigorous stand of *Adiantum capillus-veneris* that shares, along with annuals, the intimate garden close to the house. Mind you this is USDA Zone 6. Jack confesses that he has a reserve plant, brought indoors in the winter, in case of an emergency. So far it has not been necessary.

We left late for the University of Pennsylvania's Morris Arboretum at the northernmost tip of Philadelphia. Here we were welcomed by Diane Smith, a fern enthusiast and garden volunteer. Eager to do some serious photographic work with tropical ferns, I slipped away to the fernery, while Diane introduced our tour members to some of the highlights of the garden.

For us the Dorrance Hamilton Fernery (more commonly known simply as The fernery) was the highlight of the visit. Built in 1899 (and restored in 1993) it is believed to be modelled on Ascog Fernery in Scotland. The floor is five feet below ground level and the whole is covered with a Victorian style wrought-iron and glass roof. It is a magical place housing over 200 ferns dripping from walls, surrounding water features and creeping about in a tapestry of foliage. Most of the ferns are tropical or subtropical although a specimen of *Dryopteris sieboldii* was the finest I have ever seen anywhere (reinforcing my belief that it thrives in heat!). I was quite taken by huge and healthy stands of assorted maidenhairs as well as lush selaginellas. *Selaginella erythropus* with its vivid red undersides was a jewel, especially brilliant in the company of dark green companions. The Fernery was a pleasant contrast to our many outdoor excursions and a fine finale for our 'Feast in the East'.

In conclusion **Pat Acock**

We never really resolved the *Polystichum munitum* versus *P. acrostichoides* problem but we had a lot of fun and met a whole lot of new friends on the way.

At our final dinner we presented John with the traditional Jimmy Dyce whisky tumbler and Margaret with a bouquet of flowers. The British Pteridological Society would like to express its most sincere thanks to all the hosts mentioned above for their incredible generosity in both opening their gardens to complete strangers and for the copious quantities of food and drinks served. Very early on one of our hosts let it slip that he had been preparing for the visit for fifteen months and we were only there just over an hour and a half. Especial thanks must go to John and Margaret Scott, whose warmth of welcome, endless kindnesses, meticulous planning and generous giving of time made this incredible venture such a unique experience. It is generous people like John and Margaret that make the Society what it is and a joy to belong to.

OXFORDSHIRE – 15-17 July (Leader: Nick Hards)

Nick Hards (Friday), Pat Acock (Saturday) & Paul Ripley (Sunday)

On Friday afternoon seven members met up at Oxford University Botanic Gardens. The fern collection in and around the glasshouses is very impressive. Unfortunately, the same can no longer be said of the fern border. When the Society visited in July 1983 (*Bulletin* 2(5): 231), the late Theo Dyer's collection of cultivars was at its peak, with many fine varieties of *Polystichum*, *Dryopteris* and *Athyrium*. Sadly, only one or two *P. setiferum* such as 'Iveryanum' and a few of the toughest and most drought resistant *D. filix-mas* and *D. affinis* varieties remain. On the lower level, however, there is still a fine patch of *Thelypteris palustris* with some good plants of *Osmunda regalis* and *Onoclea sensibilis*. In the evening members gathered at the Cherry Tree Inn, where the weekend's itinerary was discussed and a selection of choice beers was sampled.

Around 20 members gathered on Saturday morning at Shotover Country Park (42 564062), close to the Oxford ring road. Our leader explained a little of the history and the underlying geology of the area. Although predominantly sands, one area gave way to a more calcareous substrate that could be seen in the change in the fern flora as we progressed. As we headed through the wooded area on the north-west part of the site, we saw mainly acid-tolerant species: *Dryopteris filix-mas*, *D. dilatata* and *Pteridium aquilinum*. A sign of change came when in a wet flush we encountered a fine stand of *Equisetum telmateia* not looking at all affected by the recent drought. As we moved lower and closer to the ring road, we encountered *Athyrium filix-femina* in Brasenose wood. A little further down on the stream bank, much to our surprise we found a solitary plant of *Polystichum aculeatum*. Steve Munyard delved a little deeper into the scrub covering the river and soon found *Asplenium scolopendrium* and *Polystichum setiferum*. Nearing completion of the circuit, a fine *P. setiferum* 'Divisilobum' that Nick had discovered in a ditch (42/565056) was much admired. *Equisetum arvense* and *Dryopteris affinis* subsp. *borreri* were also noted and there was a suspicion that *D.* x *complexa* may have been present.

After lunch we moved on to Harcourt Arboretum (41 554988) near Nuneham Courtenay, where we added *Equisetum fluviatile* to the count. A pleasant collection of trees yielded once again the first three ferns of the morning as well as the fern-leaved beech, *Fagus sylvatica* 'Asplenifolia'. The party became split in two but both groups reported that they had found *Dryopteris carthusiana* in quite different parts of the woods. Only one party, however, positively identified *D.* x *deweveri*, and also came upon the Fern Glade, which included plantings of *Blechnum tabulare*, *Osmunda regalis* and *Onoclea sensibilis*.

We now moved on to Dorchester (41 579941), where we were shown *Asplenium scolopendrium*, *A. ruta-muraria*, *A. trichomanes* subsp. *quadrivalens* and *A. adiantum-nigrum* on a brick wall some 150 yards from the church. Our leader had mentioned cream teas several times during the day, and members now gathered in a very pleasant garden for tea and home-made cakes. Later in the evening we gathered for the annual meeting of the 'Jimmy Dyce dining club', where nineteen of us sat down to a meal with good ferny company.

On Sunday morning, seventeen members and guests met at the fascinating Dry Sandford Pit SSSI (41/467997), a (highly) calcareous wetland. The main feature of this site is an area of shallow but moving water fed by springs arising from a rim of Jurassic limestone of the Corallian series. This was a remarkable site, surely with few parallels outside this area. Marsh helleborine (*Epipactis palustris*) was common and in full flower. Stoneworts (Characeae) were seen, and Stephen Munyard found a crayfish. We noted *Dryopteris filix-mas*, *D. dilatata*, *Asplenium scolopendrium* and *A. trichomanes* (presumably subsp. *quadrivalens*) here, but horsetails were the speciality of this site: *Equisetum arvense*, *E. palustre* and *E. variegatum*. The last species grew in the shallow water, and some spikes were producing characteristically orange cones. *Polypodium interjectum* and a clump of a large-fronded form that may have been a hybrid, were also seen.

Walking through the village of Cothill we noted *Asplenium ceterach* and *Polypodium interjectum* growing on walls. Cothill Fen (41/463998), another SSSI and Nature Reserve, is characterised by wet woodland dominated by alder and open fen. *Dryopteris dilatata* grew on some of the tussocks together with *D. filix-mas*, while *Pteridium aquilinum* was common around the drier fen perimeter. Unfortunately, we failed to find *Thelypteris palustris*, which our leader had hoped might be present at this site. We did, however, find *Polystichum setiferum* and a very good example of *D. affinis* subsp. *borreri* on the footpath leading to the fen.

After lunch, we drove to Nick and Eleanor Hards' garden on the outskirts of Didcot (41/538910). A search of the unimproved but very dry grassland in a field adjacent to Nick's house failed to reveal the *Ophioglossum vulgatum* known to be present, although *Equisetum arvense* was common in certain areas. Nick and Eleanor's garden presents a challenge since it is on heavy clay, but we enjoyed seeing some most interesting ferns. I particularly appreciated the *P. setiferum* 'Hirondelle' (possibly the only extant example of this attractive cultivar), a range of plants raised from *P. setiferum* 'Bevis' sporelings, and attractive plants resulting from intentional hybridisation of a crested form of *D. filix-mas* found by Nick at Austwick, Yorkshire, and D. *filix-mas* 'Linearis'. Finally, mention should be made of a most attractive trailing *Nephrolepis* growing indoors, and the superb tea provided by Eleanor and Nick.

Our grateful thanks go to Stephen Munyard and Bryan and Gill Smith for bringing books and BPS merchandise for sale, but of course especially to Nick Hards for organising the meeting and for showing us such varied and interesting sites.

Pteridophytes recorded during meeting in Oxfordshire, July 2005

	Shotover Country Park	Nuneham Courtenay	Dorchester on Thames	Dry Sandford Pit	Cothill village	Cothill Fen
Asplenium adiantum-nigrum			✓			
A. ceterach					✓	
A. ruta-muraria			✓		✓	
A. scolopendrium	✓		✓	✓		
A. trichomanes subsp. quadrivalens			✓	✓		
Athyrium filix-femina	✓	✓				✓
Dryopteris affinis subsp. borreri	✓	✓				✓
D. carthusiana		✓				
D. x complexa	?					
D. x deweveri		✓				
D. dilatata	✓	✓		✓		✓
D. filix-mas	✓	✓	✓	✓	✓	✓
Equisetum arvense	✓	✓	✓	✓	✓	✓
E. fluviatile		✓				
E. palustre		✓		✓		✓
E. telmateia	✓					
E. variegatum				✓		
Polypodium interjectum				✓	✓	
Polystichum aculeatum	✓					
P. setiferum	✓					✓
Pteridium aquilinum	✓	✓	✓	✓	✓	✓

NORFOLK BROADS – 10-11 September

Trevor Lording (Saturday) & Graham Ackers (Sunday)

On the Saturday morning we gathered at Barton Turf Staithe, where we were met by George Taylor, warden for the area for the Norfolk Wildlife Trust, and his son, Peter. They were our excellent boatmen for the morning.

Our first stop was an island in Barton Broad (63 360225), the interior of which had been cleared of trees. Here we saw *Thelypteris palustris*, *Athyrium filix-femina*, *Dryopteris carthusiana*, *D. dilatata*, scattered plants of *D. cristata*, *Osmunda regalis* and one plant of *Dryopteris* x *uliginosa*.

photo: B.D. Smith

Barton Broad, Norfolk

Peter Taylor (*at the helm*), Mark Kitchen, Christine Mullins, Martin Rickard, Barry Nicholson, Mary Ghullam, Gill Smith, Trevor Lording, Karen Munyard

At our next stop, on the west bank of Barton Broad (63 360216), we saw *Thelypteris palustris*, *Dryopteris filix-mas*, *D. carthusiana*, *D. cristata*, *Osmunda regalis* and an unusual looking *Dryopteris*. There was much debate about whether this was a stressed *D. filix-mas* (the area had been mowed earlier in the year) or a very unlikely cross of *D. filix-mas* and *D. cristata*. With permission, a small part was taken by Ken Trewren to grow-on so that its chromosomes could be studied and an identification hopefully ascertained. Just as we were about to board the boats, which had been moved from our disembarkation spot, we found another *D.* x *uliginosa*. We then returned to Barton Turf Staithe and, after proffering profuse thanks to George and his son, we bade them farewell and had our lunch.

In the afternoon our first stop was at the delightful church of St Michael at Irstead (63/365205), where we saw *D. dilatata*, *Asplenium adiantum-nigrum* and a specimen of an *Asplenium* looking very much like *A. onopteris* with extremely acute tips to the segments of the pinnules. Samples were taken for Ken and the Natural History Museum to confirm what might be an extremely unusual find. [Disappointingly, it was identified as *A. adiantum-nigrum*.] We then moved to Salthouse Railway Station (63 293141) where we saw *Equisetum arvense*, *Asplenium trichomanes* subsp. *quadrivalens*, *A. ruta-*

muraria and *A. scolopendrium*, all either on the platform or on the old brickwork under the platform.

Our next destination was the northern end of the seafront at Great Yarmouth (63/532089) where, on the seaward face of the sea wall, we saw possibly the most easterly occurrence of *Asplenium ceterach*. Still on the sea wall, we were also surprised to find *A. scolopendrium*, *Polypodium interjectum*, *Dryopteris filix-mas*, *Asplenium adiantum-nigrum* and some superb specimens of *A. ruta-muraria*.

Our final two stops of the day were two bridges over the disused railway between Lowestoft and Great Yarmouth. At the first (62/536980) we saw an abundance of *A. adiantum-nigrum*, *A. scolopendrium* and *Equisetum arvense*. Whilst at the second bridge (62/541969), less than a mile away, there was an abundance of *Asplenium ruta-muraria* but only a very few *A. adiantum-nigrum* and a fair number of *A. scolopendrium*.

The excellent day of ferning was perfectly rounded off first by a tour of Gill and Bryan Smith's garden, where the author of this section was transfixed by a 'foreign' fern with wonderful golden croziers unfurling, which turned out to be '*Gardencentricus plasticus*', originally discovered by Karen Munyard! Thereafter, we had a lovely meal courtesy of Gill with much good company and laughter courtesy of all present.

photo: B.D. Smith

Riverbank between Horning and Ludham, Norfolk Broads

Paul Ripley and Ken Trewren examine a potential *Dryopteris* x *uliginosa*

Before this weekend, the Norfolk Broads had meant to me no more than a watery blotch on the map, and I was uncertain what to expect. Being my first visit, some preparation was in order, so I delved into the 2001 New Naturalist *The Broads*, a highly erudite, detailed and informative tome by Professor Brian Moss. Amongst the mass of information there, I was struck by the startling fact that until the early 1960s, no-one had fathomed out how the

Broads were formed. Then an enterprising Cambridge botanist took some borings (quite a lot I think!), and along with colleagues from other persuasions concluded that they were the result of massive peat diggings between the 10th and 13th centuries. Sadly for our purposes, ferns hardly get a mention in Professor Moss' book, but my expectations were kindled by the well known occurrence of the fen buckler fern (*Dryopteris cristata*) in the region. I saw this fern for the first time in Britain at a site in Surrey in the summer, but was really looking forward to seeing more.

Our Sunday morning visit was to a reed and woodland area near Horning (63 360177). Initially a search was made for adder's-tongue (*Ophioglossum vulgatum*), seen earlier in the year when the surrounding vegetation was lower, but not re-found by us. Then, entering swampy scrubby alder and silver birch woodland, we found a few *D. cristata*, but not as robust or numerous as those occurring at our second morning site the previous day. Also present were narrow buckler fern (*D. carthusiana*), plus several good specimens of their hybrid *D.* x *uliginosa* – for me these were the highlight of the morning, beautiful plants exhibiting hybrid vigour and exuding an air of authority over their fern companions! These included also the odd *Osmunda regalis*, *D. dilatata*, possibly *D.* x *deweveri* and bracken. Both in the understorey and the open fen, common reed (*Phragmites australis*) was dominant, with associations of *Juncus subnodulosus* and both *Typha* species. At one point during the foray I reached the bank of the River Ant, and was amazed to see nose-to-tail boats edging their way along the narrow waterway (reminiscent of the M25 on which I have the misfortune to travel too often for my liking!).

Our swampy foray was followed by a short visit to a drier wood (63/355180), where we observed the common woodland fern flora – *D. dilatata*, *D. filix-mas* and bracken, plus rare occurrences of *D. carthusiana*, *D. affinis* subsp. *borreri* and *Asplenium scolopendrium*.

En route in the afternoon, we stopped briefly by a lane-side (63 370215) to see vigorous stands of *Polypodium interjectum*, *P. vulgare*, and *P.* x *mantoniae*. Our destination was Catfield Fen, part of which belongs to Butterfly Conservation, and part to the Norfolk Wildlife Trust. We were prevented from entering the former part, on the grounds of safety I think, although *D. cristata* had been recorded in that area formerly. The swampy area we did enter (63/365213) consisted of dense saw sedge (*Cladium mariscus*), the parting of which was difficult without incurring skin lacerations from the razor-sharp blade edges. Marsh fern (*Thelypteris palustris*) was abundant here, creating an amazing sight with many fronds well over a metre in height. Although both this and fen buckler fern occur in swampy ground, marsh fern prefers open very wet areas, whereas fen buckler fern prefers some cover from woodland vegetation and a slightly drier substrate. These habitat preferences can render their presence mutually exclusive, and this was certainly the case here – despite fairly extensive searching, we did not find a single *D. cristata* (although there was some potential woody scrubland present). *Osmunda regalis* was present (one particularly large plant), plus very rarely *D. carthusiana*, *D. dilatata* and bracken.

So, what of my overall impression of the Broads? Fern-wise, *D. cristata* is obviously rare, and must be highly endangered as a British native. *D. carthusiana* is much more common, and *Thelypteris palustris* abundant in many places (in the south-east we have to search hard to find this!). Also, it was good to see *Osmunda* in the wild, although it was not too common. *Phragmites*, which is everywhere, blocks out views and impedes progress, and has to be cut regularly as part of the fens management. And there are *lots* of people on the water and around the 'honeypot' settlements (e.g. Wroxham and Potter Heigham). But I think I will return. Of course, our weekend was made most enjoyable by the impeccable planning and affable company of our organisers, Bryan and Gill Smith, to whom hearty thanks are in order.

LECTURE MEETINGS AND DAY VISITS

POLYPODIUM IDENTIFICATION DAY, NEW FOREST, HAMPSHIRE – 5 February

Martin Rickard

Deep in winter outdoor ferning is not foremost on everyone's mind. It was therefore extraordinary to see between 60 and 70 keen botanists (about half from the Hampshire Flora Group) assemble for a walk in the New Forest to look at polypodies, in particular *Polypodium cambricum* (or more sensibly here called *P. australe*). *P. australe* is of course a calcicole yet it has been recorded on oak trees deep in the forest far from any walls or any other recognised source of lime. This meeting, centred on the epiphytic colonies in grazed wood pasture around Clayhill Heath, Lyndhurst (41/301061), was organised to inspect the colonies and to discuss the ecological consequences.

In dry weather, we were fortunate to have several eminent specialists with us and two gave introductory talks before the walk. Fred Rumsey explained the genetic origins of the three species of polypody native to Britain, while Chris Page put forward the exciting hypothesis that maybe there are four species here with a calcifuge *P. australe*-like species making the fourth. He admitted that this is very unlikely but by thinking the unthinkable he certainly got us all thinking – and talking.

photo: P.J. Acock

Andy Byfield with mat of *Polypodium* fallen from a tree in the New Forest

Introductory talks over, we set off deep into a forest very wet under foot. Polypods were frequent high on the old oaks although most colonies were out of reach or were identified as *P. interjectum*, another calicole, albeit weaker than *P. australe*. We could not rule out the presence of the calcifuge *P. vulgare* but none was positively identified. After penetrating deeper into the forest we were shown *P. australe* on several trees, including a semilacerate form in one colony. The opinion that it had been correctly identified was quickly agreed, although the possibility of some hybridisation could not be totally ruled out.

Most of the party split into two groups for lunchtime detours - some to view the substantial colonies of *P. australe* growing in more typical habitat on the limestone walls of Beaulieu Church and Abbey (41/388025), whilst others visited Andy Byfield's private collection of *Polypodium* cultivars. After lunch, the meeting moved under cover to the Testwood Lakes Study Centre to discuss the morning's findings and listen more easily to further presentations. Members had brought fronds for identification and comparison. Many thanks to the Beaulieu Estate for permission to visit the Beaulieu Church area, to the Hampshire Wildlife Trust for use of the Testwood Lakes Study Centre, and to Andy Byfield for organising such a successful and interesting day – in winter!

(After the event, in conversation with Ray Woods, an eminent Welsh bryologist, pteridologist and all round botanist, I learnt that oak trees attract a calcicole moss flora so he was not too surprised by the New Forest records. Also, since this meeting *P. australe* was found on oak trees, far from lime, during the Pembroke meeting.)

AGM AND SPRING INDOOR MEETING, MANCHESTER – 19 March

Graham Ackers

Most refreshingly, the Society had the benefit of a new AGM venue this year, the University of Manchester's School of Biological Sciences Botanical Experimental Grounds in Fallowfield. Facilities included the lecture meeting room, together with other smaller rooms for tea-making, BPS merchandise, etc. Our plant sales 'stall' was set up in one of the many greenhouses, and the grounds provided the opportunity for exploration and relaxation (at least at lunchtime!), aided by a beautiful sunny day (a Manchester 'first' for me!).

Over 50 members took their seats for the first of two Rickard's Hardy Ferns presentations. Martin Rickard and his then wife Hazel set up the nursery in 1988, partly as a hobby (Martin described it as 'a game'!), and partly to provide Hazel with some meaningful employment, as their rural location at Leinthall Starkes near Ludlow excluded most types of more conventional employment. The first priority was to obtain a good stock for propagation. Martin already had a major collection of ferns, and this was enhanced by various acquisitions such as donations from Christopher Fraser-Jenkins. The nursery expanded in 1993 with the move to Kyre Park, Tenbury Wells, and Martin described the various practical and financial burdens borne in sorting out that site.

The nursery first exhibited at the Malvern Show in 1991, displaying non-aesthetic white plant labels, and disobeying several show rules! These teething troubles were eventually corrected, and other shows followed, including Chelsea (starting in 1992), Hampton Court and the NEC. The nursery went on to achieve several awards, starting in 1993 with a string of Gold medals at Chelsea, and crowned by being given the Tudor Rose Award for best in show at Hampton Court in 1996. The main benefit to a nursery of attending shows is to gain publicity. Even more publicity was achieved when the nursery was featured on Gardeners' World. Martin showed fascinating slides of the nursery's ferns and show stands, and went on to describe some of his suppliers in Australia, New Zealand and Holland.

In 2002, Martin sold Rickard's Hardy Ferns to Dick Hayward, who gave the next presentation on his experiences in setting up and running a fern nursery. Having acquired a derelict hill farm in North Wales, the first task was to move Martin's stock and find somewhere to store the ferns pending the physical establishment of a nursery infrastructure. Dick showed slides of the various outbuildings, all of which were used following suitable modifications. Particularly traumatic were the frustrations experienced in trying to erect polytunnels on ground with a high proportion of bedrock! More recent slides of ferns in their various housings suggested a thriving nursery with a substantial stock. Dick's mission for the nursery is "to be able to offer the widest possible variety of ferns" (most at the meeting were quite happy with that!). Like Martin, but never having previously attended a

flower show, Dick has also exhibited at Chelsea, Hampton Court, NEC and Tatton Park shows. He is particularly keen on introducing fern species new to cultivation, and to this end has visited Taiwan, as some of their high altitude species might be hardy here.

Over the lunch period, and again after the AGM, Thurston Heaton took three parties around the grounds, starting with the Alpine House where he showed an aerial photograph of the grounds in the 1970s. 'The Firs' is the mansion built by Joseph Whitworth, the Manchester engineer, in 1851. Subsequently acquired by the University, it has served as the Vice-Chancellor's house, and is now the University conference centre, Chancellors. Thurston conducted us around the various greenhouses, some with plants being grown for research, some for demonstrations to schoolchildren, and some being purely ornamental. In the latter category, one large greenhouse was divided to provide four different habitats, one being suitable for and housing a variety of ferns. The tour finished in the moss house, which had a wonderful cool and humid atmosphere, and housed some *Hymenophyllum* species and *Trichomanes speciosum*. But the *pièces de résistance* were splendid plants of the New Zealand endemics *Leptopteris hymenophylloides* and *L. superba*, together with their smaller progeny. I have seen these species several times in the wild in New Zealand, but none of the plants I observed there were any larger than these!

The AGM took place in the afternoon (see account elsewhere), and in the evening about 20 members dined at a splendid Indian restaurant in the Wilmslow Road.

On the Sunday morning, a few members met at Tatton Park, principally to see the Fernery, an impressive building designed by George Stokes (the son-in-law of Joseph Paxton) and built in 1859. Apparently it has proved necessary to remove the roof twice in the last five years, so rendering any investment in choice ferns somewhat foolhardy. However, there were many ferns present, though the vast majority were *Dicksonia antarctica* and *Woodwardia radicans*. Spotting any other fern species was accepted as a challenge by the party, who eventually discovered occasional mainly small specimens of *Pteris cretica*, *P. tremula*, *Asplenium scolopendrium*, *Dryopteris dilatata* and a *Hypolepis* sp. Despite the paucity of fern species, the overall ambience was impressive, and the plants were set off to great effect by the curtains of *Ficus pumila* draping all the walls.

Helped by the two ingredients of sunshine and good company, the weekend proved to be most enjoyable, and particular thanks are due to Yvonne Golding, Roland Ennos and Thurston Heaton at the facility, Pat Acock and Bryan and Gill Smith for manning the plant sales and merchandise stands, and our two speakers Martin Rickard and Dick Hayward.

POLYSTICHUM MINI-SYMPOSIUM, RBG, KEW – 19 November Pat Acock

Graham Ackers opened this meeting, which was attended by around fifty people, with an outline of the day's tight schedule.

David Wagner from the United States started the proceedings with a talk on '*Polystichum* in North America: the boreal element', a look at his studies on *Polystichum andersonii* and relatives. This species had been thought to be an autotetraploid by some, unrelated to *P. munitum*. However, Herb Wagner's cytological data and a fresh morphological analysis suggested *P. munitum* is a diploid ancestor, so the hunt was on for the other. The only candidate turned out to be a herbarium specimen of the tops of three fronds. David set out for Alice Arm in British Columbia, the 1934 collecting site, but was unable to relocate that species. He did find another rare species, *P. setigerum*, which turned out to be a hexaploid. He later described the presumed diploid ancestor of *P. andersonii*, which he named *P. kwakiutlii* after one of the native peoples of the region.

After coffee, Mary Gibby outlined Anne Sleep's work on *Polystichum* hybridisation at Leeds University. Anne did a lot of work on European polystichums but later turned her

attention to crossing them with more exotic species, some as far away as Australia. Even these contained some chromosome pairing, showing distant relationships. Mary intrigued us with a paper that Anne wrote for the *Fern Gazette* but subsequently withdrew, which illuminated much of her otherwise unpublished work. Mary was encouraged by the audience to publish some of these studies. Mary clearly outlined the genetic principles of hybridisation, and also explained the Leeds method of experimental hybridisation.

Speaking on the subject 'Variation in *Polystichum setiferum*', Robert Sykes introduced us to our new book, BPS Special Publication no. 7, *Polystichum Cultivars – Variation in the British shield ferns* by J.W. Dyce, edited by Robert Sykes and Martin Rickard (ISBN 0-9509806-6-8). Robert outlined how Jimmy Dyce had the work in hand just before he died, but it had languished for many years as much effort was needed to bring it to a publishable form. Robert discussed many of the problems of nomenclature and identification of the cultivars and the difficulties of fitting them into a classification meeting the criteria of the *International code of nomenclature for cultivated plants*. Robert outlined the various cultivar groups with the help of illustrations, and we were able to buy a copy of the book, hot off the press, to take home and study further.

During lunch the morning's proceedings were discussed informally and we had to be hurried to reconvene to fit in the lengthy afternoon programme.

First on was Heather Driscoll from the University of Vermont, USA, who discussed her work with David Barrington as displayed on a huge poster that they had prepared for the symposium. The poster showed the distribution of *Polystichum* throughout the world, indicating centres of endemism – areas with more than ten species of which the majority are endemic. Much discussion ensued on the numbers of *Polystichum* in different regions and why certain parts of the world are richer than others. Further discussion revolved around the phylogenetic analysis that David Barrington's team had generated by comparing DNA sequences of fifty of the approximately 250 polystichums presently thought to exist.

Martin discussed recent developments concerning two of his favourite ferns. *P. setiferum* 'Bevis' was discovered by Jno. Bevis in 1876 at Hawkchurch in Devon. 'Bevis' is normally sterile but late in the 1890s or 1900s a few spores were discovered by C.B. Green. He was a neighbour of C.T. Druery and they sowed the spores with remarkable results. All the wonderful progeny was, however, sterile and all the forms have remained very rare. Today things are changing. Dutch growers are tissue culturing these rare plants and reproducing many of the old rare cultivars, BUT, they are also producing remarkable new breaks via the tissue cultures and Martin showed images of many of these exciting new forms. His other special interest cultivar was the Crawfordsburn fern (*P. setiferum* 'Crawfordiae'). First found wild in Northern Ireland in 1861, it has become shrouded in mystery and in the minds of many considered to be probably extinct. Staff at Glasnevin Botanic Garden in Dublin have searched gardens for it in the past without success. Many people claim to grow it but on inspection all plants turn out to be a standard form of 'Divisilobum'. However, last year Martin met a Northern Irish gardener, Margaret Glynn, who said she had it and would send him a frond. This she did and he was immediately impressed by the likelihood that this was THE fern. With Jim Denison of Limerick, Martin visited Margaret's garden, and is now convinced that this is truly the fern. Another grower nearby, Garry Dunlop, also has the plant (from Margaret) and Garry has passed a piece to Jim. So, after a century or so in the wilderness, the Crawfordsburn fern is alive and well in at least three gardens in Ireland.

Next Heather Driscoll spoke to us on the 'Evolution and biogeography of Hawaiian *Polystichum*'. The volcanic Hawaiian islands, 4,000 miles from the nearest land-mass, were colonised by long-distance dispersal; plants could then island-hop. Wide variation in substrate, topography and moisture regime allows closely related plants to grow quite close together and speciation seems to occur comparatively quickly. The 180 pteridophytes

comprise a high 16% of the vascular plant flora, and 76% are endemic to the islands. Fosberg proposed that the source region for almost half the fern colonisations was the Indo-Pacific, the rest being American, Australasian, pantropic/cosmopolitan or boreal. Phylogenetic studies have helped shed light on this and revealed the number of colonisation events that have taken place. Heather and David Barrington's hypothesis was that the three polystichums found in Hawaii were the result of two or more migrations from both the new and old worlds. Their DNA, isozyme and morphological studies suggest that the diploid *P. hillebrandii* is remote from the other two, being more closely related to *P. neolobatum* from eastern Asia. Both the tetraploid *P. haleakalense* and the octoploid *P. bonseyi* were found to be closely related to *P. wilsonii* from Asia and Africa. So it is likely that there were only two colonisations, both from the old world.

Fred Rumsey spoke about '*Polystichum* in Europe and Macaronesia'. He showed the relationships of the European species, all either diploid or tetraploid. Interestingly, although *P. braunii* does hybridise, no allopolyploids have arisen from them. Fred then moved on to discuss the Madeiran endemics. *P. falcinellum* is quite common on the island above 900 metres, but whether its origins lie in North America (it looks superficially like *P. munitum*) or in Asia is not known at present. It hybridises with *P. setiferum* and the hybrid, *P.* x *maderense* is often quite variable. One of the questions raised was whether the form depends on which parent is the female. The other Madeiran endemic is the globally threatened *P. drepanum*, of which less than twenty plants are known. Brest Botanic Gardens has long had this species in cultivation, along with other threatened island endemics, with a view to re-introduction. Little is known of this species' affinities. Fred then touched on alien ferns that have escaped from cultivation in Britain and which may become even more successful with changes in the climate. *P. munitum* has already successfully hybridised in the wild with native *P. setiferum*, and *P. tsus-simense* has escaped onto a wall in London.

Our final talk was by David Wagner, who now concentrated on the Mediterranean element of *Polystichum* in western North America. For his PhD studies he had sought to refine Herb Wagner's 1973 interpretations of relationships in this complex. Central to this re-evaluation was differentiating *P. munitum* from *P. imbricans*, which Herb had treated as a single species. David proposed that *P. imbricans*, and not *P. munitum*, was ancestral to *P. scopulinum*. He also suggested that *P. imbricans* had contributed to the genome of *P. californicum* based on morphological analysis. A cytological study in Oregon supported this idea but Herb's early cytological work in California indicated unequivocal involvement of *P. munitum*. At first David believed that both *P. imbricans* and *P. munitum* had hybridised with *P. dudleyi* to produce a genetically complex *P. californicum*, perhaps over the time *P. imbricans* evolved from *P. munitum*. However, more recent DNA analyses pioneered by Pam Soltis clearly show *P. imbricans* as the sole once-pinnate progenitor of *P. californicum*. Since this directly contradicts the cytological evidence, an explanation is needed. In the first place, it appears cytological analysis cannot always discriminate between two closely related species when seeking to determine parentage of a hybrid taxon. David further proposed that the morphology of *P. californicum* is explained by the 'Vavilov Effect', the phenomenon of a hybrid taxon tending to look more like a parental species when growing in the company of that parent. Thus, *P. californicum* looks more like *P. dudleyi* when growing in the company of *P. dudleyi* and it looks more like *P. imbricans* when growing in the company of that species.After some discussion and many votes of thanks to the speakers, we especially thanked Graham Ackers, who not only conceived the idea of the meeting, but also put in a prodigious amount of work to find the speakers and then organised all the logistics including a splendid dinner afterwards. Thanks also go to Peter Edwards of Kew, without whom we could not have had such a carefree day and such excellent facilities.

REGIONAL MEETINGS

LEEDS & DISTRICT

Polypodiums around Malham, North Yorkshire – 13 November 2004 Barry Wright

Technically this was in the year 2004 but as our Group AGM is in October each year, a trip in November is reported in the following year. In our 2004/05 year our field trips got off to an early start. A hardy band of members braved the crisp November morning to explore the limestone cliffs around the Gordale Scar area of Malham (34 9063). This was a lead-on from discoveries and studies by Ken Trewren and Bruce Brown of the full set of species and hybrids of *Polypodium* in the area. Confirming the identification of some specimens was difficult, as they were sometimes high up on the cliffs out of reach of normal mortals. But both Ken and Bruce had been working hard to come up with cunning devices to reach up and snip off diagnostic bits that could flutter down to eager hands that would instantly recognise *Polypodium* x *shivasiae*! That was the theory. The Bruce Brown Mk1 patented *Polypodium* snipper was brought in to play. This ingenious device enabled samples to be taken from some three to four metres up the cliff. Unfortunately, the Mk1 only snipped. It sometimes allowed the frond to drop into the cliff-top vegetation where it seemed quite happy to stay, despite much prodding and poking. [The Barry Wright Mk2 snipper, with the deluxe frond-gripping snipper head was used to good effect during the Malham/Arncliffe meeting in August 2005 (see p. 292).]

main photo: A.J. Evans

Bruce Brown mastering the *Polypodium* snippers MK1, with Brian Byrne poised to catch a frond; the MK2 snip-and-grip head inset

Despite the cold, the day was bright and sunny and the area remarkably free of tourists, so we could happily wander around snipping and pondering the finer points of identification of *Polypodium* hybrids. And yes, we did see all three species and all three hybrids during the day.

Nidderdale, North Yorkshire – 12 March Robert Adams

The Nidderdale Area of Outstanding Natural Beauty (AONB) offered the Leeds and District Group (through me) a small grant to survey some of the woodland in Nidderdale and prepare a list of the pteridophytes found. The first site to be visited was Bryan's Wood (44 187623), a mature, semi-natural broad-leaved wood with an area of anciently coppiced alder carr. The early date meant that the deciduous species would not be seen but it was known from previous botanical surveys that *Phegopteris connectilis* and *Athyrium filix-femina* grow in the wood. *Pteridium aquilinum* and *Dryopteris dilatata* dominated the ground flora, with occasional plants of

Polypodium vulgare, *Blechnum spicant*, *Dryopteris filix-mas* and *D. affinis* subsp. *borreri*. Ken Trewren found possible *Trichomanes speciosum* gametophytes and identified some dry grass stems as *Festuca altissima*, a rather rare grass often associated with other rare species of woodland plant.

After lunch we moved up the dale a few miles to Skrikes Wood (44/154642), a site the Group has visited several times. The species list was the same as for Bryan's Wood, with the addition (thanks to Ken's expertise) of some undoubted *Trichomanes speciosum* gametophyte and a few of last year's *Phegopteris connectilis* stalks. After wading through the stream, then scrambling over a steep bank and some large rocks, one of the group found a patch of *Hymenophyllum wilsonii*.

The Upper Don Valley, South Yorkshire – 2 & 30 April **Paul Ruston**

We had decided to hold a couple of early seasonal meetings in South Yorkshire to look for and record *Trichomanes speciosum* gametophyte and other winter green under-recorded ferns. All information was to be shared with South-Yorkshire Biodiversity Research Group to be added to records for their planned atlas.

Raynor Clough and Ewden Beck – 2 April

With the kind permission of the land owner, three of us entered the steep-sided and densely wooded Raynor Clough. We worked our way slowly up and along the sides of the clough where there were many fragmented rocks, large boulders and fallen trees, all providing a matrix of habitats in which one would expect *T. speciosum* gametophyte to grow, particularly close to the stream. Surprisingly, none was seen until near the top of the clough, where there were more solid and stable sandstone outcrops, in the crevices and fissures of which were good colonies (43/274953). There was water seepage through the rock fissures where the gametophyte was most prolific. *Polystichum setiferum* and one very large *Asplenium scolopendrium* were seen. *Dryopteris affinis* subspp. *affinis* and *borreri* were very evident, but with fronds now lying on the ground. The fronds of the ubiquitous (here in Raynor Clough) *D. dilatata* were already unfurling, the growth of those in the more sheltered hollows being quite advanced in South Yorkshire for so early in the year.

At Ewden Beck whole areas were found to be strangled with thickets of *Rhododendron ponticum*, therefore movement was slow, restrictive and tedious. Nevertheless, we did find one small patch of gametophyte in the narrow crevice of a Gritstone outcrop (43/229964).

The Porter or Little Don River, Langsett – 30 April

The same three met at a car park off the A616 (44/202012). On my latest edition OS Explorer map OL1 the river sides here are depicted as woodland; it soon became obvious that this information was incorrect and there was no sign of logging having taken place in the recent past. The river slopes comprise thick and in places unstable shale with thin protrusive bands of sandstone. This, and the lack of tree cover, made the prospect of suitable gametophyte sites very remote. We did, however, press on and follow the Little Don River and its tributaries, but after a great deal of legwork in very wet conditions we did not find a single site. Growing in a boggy, wet flush – there were plenty around – we saw *Equisetum arvense*, *E. fluviatile* and *E. palustre*, with common dog violet, *Viola riviniana* occupying the higher and slightly drier sides of the spring line.

Except for the *Trichomanes speciosum* gametophyte at Raynor Clough, we were unable to add any new fern records for South Yorkshire, but this record alone made the two meetings seem worthwhile and rewarding.

Moonwort Surveys, Yorkshire Dales – 13, 14, 22 & 29 May **Barry Wright**

The continued support of a small but dedicated group of moonwort (*Botrychium lunaria*) and adder's-tongue (*Ophioglossum vulgatum*) searchers returned to the Dales to extend the surveys done in the previous year. A preliminary recce on the 13th May showed promise for

a number of new routes to survey, in particular the section from Langthwaite (45 001043) to The Stang (45/018067), which is a high level road extending to over 500 metres. The recce revealed occasional records at around this altitude.

On 14th May we started with three sections as we had three teams – Bruce Brown, John and Brenda Wilson, and me. We radiated out from Surrender Bridge between Swaledale and Arkengarthdale at 34/989988. Bruce went south and found sporadic colonies of moonwort and a nice patch of adder's-tongue. The Wilsons went north and found records early on, then after a gap, more towards the end of their section. I went east and got a number of records at intervals. A curious pattern started to emerge that continued with later surveys: there seemed to be an uncanny affinity of clusters of records with the branching-off of footpaths and bridleways from the metalled roads. This could be because at these locations there is often a wide apron of short grass that provides good conditions for colony development.

Other observations suggest that colonies occur on both sides of a road i.e. if there are colonies observed at a point on the 'out' leg of the survey, then further colonies are found almost or exactly opposite on the 'return' leg. Does this indicate that the colony developed from spores germinating within a short distance of the parent plant, or does it suggest that the colony has persisted on both sides from the time when the road was tarmacked and effectively severed any potential for vegetative movement across the carriageway? Further analysis of the data may give some clue as to why the colonies cluster, how frequently they match up on both sides of the road and how the colonies establish, persist and expand. The afternoon was spent on the road between Askrigg and Grinton. Again, good, if somewhat sporadic, records of both moonwort and adder's-tongue were made.

On the 22nd May there were two of us, my wife Anne and me. We filled in some of the gaps from the previous week on the Askrigg to Grinton road and also some of the gaps left from the 2004 survey on the Leyburn to Grinton and Redmire to Grinton roads. Of note was our highest record yet of adder's-tongue at 461 metres (44 040949). Again, the pattern of clusters where footpaths and bridleways meet the road was evident.

The final trip in 2005 was by me to complete the section from Surrender Bridge to Langthwaite. This began at the ford made famous as an opening shot for the television version of 'All Creatures Great and Small' by James Herriot. This included an area of old lead mine spoil with some moonwort being found away from the road here, and again records were associated with footpaths and bridleways.

Many thanks to the diligent searchers. Back for some more next year?

Ramsley Moor, Chesterfield, Derbyshire – 25 June **Barry Wright**

On a slightly damp summer's morning, five hardy souls turned up at the car park at 43/295748. From here we walked a short distance northwards up the road before following a footpath off to the west and down into the valley where we were to look for horsetails and their hybrids. We began with *Equisetum palustre* at 43 294756, followed quickly by *E.* x *litorale*, then *E. sylvaticum*, *E. fluviatile* and finally *E. arvense*. In the process we also saw *Pteridium aquilinum*, *Oreopteris limbosperma*, *Blechnum spicant*, *Athyrium filix-femina*, *Dryopteris dilatata*, *D. carthusiana* (and possibly *D.* x *deweveri*) and *D. filix-mas*.

A short trip down the road brought us to an overflow channel for Ramsley reservoir (43 286745) that supported 'wall' ferns, particularly *Asplenium ceterach*, along with *A. ruta-muraria*, *A. adiantum-nigrum* and *A. trichomanes* subsp. *quadrivalens*; *Cystopteris fragilis* was also present. Then "off to t'pub for a bit o' snap" before the afternoon's trip into Coombs Dale (43 222743). Here we saw a varied fern flora including *Asplenium ruta-muraria*, *Cystopteris fragilis*, *Polystichum aculeatum*, *Polypodium vulgare*, *Dryopteris affinis* subsp. *borreri*, *P. interjectum*, *Asplenium scolopendrium* and two horsetails, *Equisetum palustre* and *E. arvense*.

The final bit of Paul Ruston's grand tour was to go 'deep-dark-holing' to look for the gametophyte of *Trichomanes speciosum*, which we found very abundantly in good condition. We also found a nice patch of *Gymnocarpium dryopteris* along Froggatt Edge at 43/249769. As it was high summer it was still light when we finished, just! Paul does like to get good old-fashioned Yorkshire value out of his trips, for which we are very grateful. Thanks Paul for a tiring but very rewarding day.

Whitby and Goathland, North Yorkshire – 23 July **Barry Wright**

On the promise of real local fish and chips eaten while taking in the ozone at Whitby, Ken Trewren lured seven of us to his side of the North York Moors. Fortunately (or unfortunately) the day coincided with the arrival of the tall ships race, so the town was rather busy. But it did give those who arrived early an extra treat. The morning was spent looking at 'urban ferns', loosely speaking. Beginning at the bus station, Ken led us to a site for *Adiantum capillus-veneris* growing on mortared brickwork in the back alley to a row of terraced houses at 45/895107 along with *Asplenium scolopendrium*, *A. trichomanes* subsp. *quadrivalens* and *A. ruta-muraria*. On the way we also saw *Polypodium vulgare* and *Athyrium filix-femina* growing out of mortared walls. I thought we might have the chance of a bracken-free field trip, but not so. On our way to another back-street alley, there it was growing at the end of someone's unkempt garden. But we were on our way to see some *Asplenium adiantum-nigrum* at 45/898106. There was evidence that the colonies had been sprayed.

On our way to the harbour we passed *Dryopteris filix-mas* and *D. dilatata*. Our target was the *Asplenium marinum* at 45/898115. This was growing near the top of the harbour wall but it was still somewhat difficult to hang out under the railings to get a good view. We got a better view on our way through town, as there was more *A. marinum* growing on the wall round the toilet block (45/898114); not so salubrious, but easier access. A trip over to the other side of the river to try to see *Azolla filiculoides* was fruitless, but we did add *Cystopteris fragilis* to the list as this was growing on the abbey walls. Then it was back down for some splendid 'out in the open' fish and chips.

After lunch we moved off to Goathland, stopping en route to look at a most unspectacular *Botrychium lunaria* (one sterile blade 1.5cm tall) near a cattle grid at 45/853032. I had discovered this when I found myself early for the rendezvous and pondered the possibility that moonwort might still be up. Compared with the very civilised morning, the afternoon was to be one of Ken's 'moderate going' strolls. After 30 minutes of scrambling, brambling and general climbing up and slipping and sliding down slopes, we arrived at the base of a cliff supporting, along its length, *Dryopteris aemula*, *Oreopteris limbosperma*, *Blechnum spicant*, *D. affinis* subsp. *borreri*, *Polystichum aculeatum*, *Phegopteris connectilis* and an unidentified and possibly 'new to science' *pachyrachis*-type *Asplenium trichomanes*. Very healthy colonies and distinctly not *quadrivalens*-like.

On the way back the bracken lovers had a treat – a huge stand, taller than head height, which left the groups shouting pitifully to each other in order to find a way through and back to the quaint pub in Beck Hole. A good, somewhat 'mixed' day. Thanks Ken.

Malham/Arncliffe, North Yorkshire – 13 August **Bruce Brown**

Eight members braved the elements to rendezvous at Street Gate near Malham Tarn (34/903656). At a height of 370 metres, we were already above the cloud base and rain was falling steadily. With three sites to visit, we retreated to the lowest and most sheltered one (34/910632), hoping for things to improve later. This site lies just below Gordale Scar, the Foss being a 20-metre waterfall plunging down into a well-wooded steep limestone valley. Following on from Ken Trewren's study of polypodies and their hybrids in the Malham Cove and Gordale area, which we had visited as a group in November 2004 (see p. 289), I

had checked Janet's Foss Wood over the winter months, finding mostly *Polypodium interjectum* and *P. vulgare*. But interestingly, with confirmation by Ken and Rob Cooke, we consider the three *Polypodium* hybrids to be present here also. The nearest colony of *P. cambricum* grows a kilometre away, west of Gordale Scar.

On our current visit we noted that the *P. vulgare* colonies were well developed with ripening sori, whereas the *P. interjectum* was still producing new fronds and any sori present were very green, so the colonies were nowhere near as luxuriant as they had appeared over the winter. Dropping down to the fall pool (34/911633), we saw both species growing on the rocks and epiphytically on several trees. A little further downstream the path wends its way beneath a ten-metre high crag with some *Polypodium* fronds visible but unreachable along the top (34 910632). From a previous examination of fallen fronds this is considered to be a *P.* x *font-queri* colony, based on its complete infertility and characters relating to both *P. cambricum* and *P. vulgare*.

But with nothing to examine now, we continued further downstream to a site where a crag with a large cave mouth at its base was visible up the valley side, requiring a slippery climb (34/909632). Barry Wright produced his patent Mk 2 '*Polypodium*-gathering tool' (a pair of string-operated rose-gathering snips on the end of two camera monopods joined together), which was a much-improved version of my tent poles and scissors that we had field-tested in November (see photo p. 289). The fronds were large and elegantly adorned with doubly serrated edges and have been identified as *P.* x *shivasiae*. Ken Trewren took a sample with green sori for chromosome squashing. Near the bottom of the wood another slippery climb took us up to a small craggy face with several clumps of *P. interjectum*, but one colony was noticeably different, with fronds containing both ripening and aborting sori (34 909631). This was confirmed as *P.* x *mantoniae*.

Other limestone pteridophytes noted as we returned back up the wood were *Polystichum aculeatum*, *Dryopteris filix-mas*, *Cystopteris fragilis*, *Asplenium scolopendrium* and *A. trichomanes* subsp. *quadrivalens*. There were a few *Dryopteris dilatata* plants growing on old stumps and even a lone *Athyrium filix-femina*.

We returned to Street Gate for lunch in the cars with the rain still beating down, then, undaunted and clad in waterproofs, we set off for the two-mile walk up to the watershed between Malhamdale and Littondale. Fortunately, the cloud base lifted and the rain gradually eased. We reached a wet flush near the top (34 908690), which yielded *Equisetum palustre* and *E. fluviatile*. However, our main objective was the limestone pavement nearby (34/911693) at a height of 460 metres. This habitat is typical for *Polystichum lonchitis* in the Yorkshire Dales, although over many acres of seemingly suitable terrain it tends to crop up only very occasionally. On my reconnaissance I had counted 51 plants but members noted a further 11 plants on the day, which makes this site second only to Moughton in terms of numbers. We were much impressed by the active growth of new fronds and baby plants. Only one or two had that brown leathery appearance of aged plants. Most grew protected in the grykes with a few frond tips bitten off here and there, but many were in pristine condition. Perhaps the sheep-grazing regime is still low following the foot and mouth disease outbreak in 2001. No signs of hybrids with the commonly occurring *Polystichum aculeatum* were suspected.

Other associates in this splendid area of limestone pavement were *Asplenium viride*, *A. trichomanes* subsp. *quadrivalens*, *A. ruta-muraria*, *A. scolopendrium*, *Cystopteris fragilis*, *Dryopteris filix-mas*, and an occasional *D. affinis* subsp. *borreri*. One *Polystichum aculeatum* was notable for its cristate form. *Gymnocarpium robertianum* was also well represented but *Dryopteris submontana* was absent. A weak-looking *Athyrium filix-femina* was also present.

The sky was rapidly turning blue as we returned to visit our last site just five minutes walk east of Street Gate (34/910656). This flush consists of small runnels flowing gently over calcareous

silt and was inhabited by a good colony of *Equisetum variegatum* as well as *E. fluviatile*. The slightly drier parts contained *E. arvense* (which was coning on a previous visit in early June) and *Selaginella selaginoides* was also present along with *Primula farinosa* and *Parnassia palustris*. So ended an interesting day with 22 taxa seen and not a frond of bracken in sight.

Nidderdale, North Yorkshire – part two – 27 August **Robert Adams**

Old Spring Wood (44/204627) was the third site we visited as part of our survey of the woodland of Nidderdale. Only a mile or so from the first wood that we visited in March, it had the same basic group of acidic woodland species: *Pteridium aquilinum*, *Dryopteris dilatata*, *D. filix-mas*, *D. affinis* subsp. *borreri*, *Athyrium filix-femina* and *Blechnum spicant*. A diligent search of the nooks and crannies of the gritstone rocks by Barry Wright and Paul Ruston resulted in the discovery of *Trichomanes speciosum* gametophyte. Barry also managed to find a wasps' nest, the irate occupants of which thanked him in the usual way.

The afternoon session was spent at Cock Hill Lead Mines, Greenhow (44/112644), not a woodland site but with considerable pteridophyte interest nevertheless. On the ruined walls of the old mine buildings we found *Asplenium scolopendrium*, *A. trichomanes* subsp. *quadrivalens*, *A. ruta-muraria*, *Polypodium vulgare* and *Cystopteris fragilis*. The veins of lead ore at Greenhow were mined by cutting horizontal shafts into the Carboniferous limestone, which resulted in a lot of limestone waste. As this had to be cut by hand and carried out manually, it was in fairly small pieces. The spoil heaps formed from this material are thus a man-made limestone scree habitat. On the top of the main spoil heap was a thriving colony of *Dryopteris submontana*; this is in a ten-kilometre square with no record for this species in the 2002 *New Atlas of the British and Irish Flora*. In the wet ground around the stream we found a small patch of *Equisetum fluviatile* in amongst a large area of *E. palustre*. Barry noticed that one or two of the *E. palustre* plants were carrying cones on the branches as well as on the main stem. By coincidence, there was an article by Chris Page in the 2005 *Pteridologist* on this phenomenon of polystachy; it is described as unusual – another plus for the day. We made a detour on the trek back to examine some *Blechnum spicant* growing in a vertical rock-face. Plans have already been made to revisit this area next year to look for the *Botrychium lunaria* that has been seen in previous years.

The Sheffield Botanical Gardens and Rivelin Valley, South Yorkshire – 17 September **Paul Ruston**

The Grade 2 listed Sheffield Botanical Gardens had for many years suffered from serious under-funding. This was noticeable in the deterioration of the three pavilions that date back to the early Victorian era and were the jewel in the crown of these excellent gardens. About five years ago the gardens were granted, with the push of a dedicated steering committee and the enthusiasm and fund-raising zeal of the Friends of the Botanical Gardens (FOBS), Lottery funding of £6.68 million with which to restore the gardens and pavilions to their 19th-century glory.

On a warm and bright morning eight members met on the roadside by the main gates (43/334863) to take a grand tour of the gardens. It soon became quite clear to us that ferns, both native and foreign, had featured extensively in the replanting of the beds. A mass planting of *Dryopteris cycadina* in the dell looked superb and on the bank-sides of the dell *Polystichum setiferum*, *P. aculeatum* and their varieties could be seen. Unfortunately, some of the ferns were incorrectly labelled, in many cases by the supplier.

After an excellent lunch at the 'Curator's House' cafe (formerly the curator's residence), we entered the magnificent carefully restored pavilions. The three pavilions are linked by two ridge-and-furrow-roofed greenhouses and contain plants from temperate and more tropical regions of the world. An automated climate control system monitors their environment. A team of horticulturists from RBGE (Royal Botanic Garden Edinburgh) helped to establish

the plants. We entered the Pavilions at Asia, where a large banana tree towered over beds of *Blechnum revolutum* and two unnamed cyatheas with black, spiny barbs along the basal region of the stipe (*Cyathea spinulosa*?). Our journey continued through the Himalaya, where we saw *Adiantum hispidulum*, *Culcita macrocarpa* and many more. Arriving in New Zealand, as expected, tree-ferns dominated the scene: *Cyathea cunninghamii*, *C. dealbata* and *C. smithii*. The star turns here had to be the *C. medullaris* (black tree-fern), their huge fan-like fronds on glossy black stipes already, two years on from planting, pushing at the glazing above. What a stunningly beautiful fern. A young *Todea barbara* and several handsome looking plants of *Pteris cretica* 'Albomarginata' were admired. You wouldn't need to be a cactus enthusiast to find yourself lingering in the South America zone – what amazing form and subtlety of colour these statuesque plants have. And finally, South Africa – no ferns, but many attractive and interesting plants to see.

A short drive in the afternoon took us over to the Rivelin valley (parking at 43 290872) to walk a three-mile stretch of the river Rivelin, a site of historical importance concerning Sheffield's early cutlery industry. With the construction of weirs, leets and dams, the early industrialists built their water mills here; one weir is known to date back to the early sixteenth century. Nature has now reclaimed this stretch of river and forged a good habitat for wildlife, and ferns. A car-share enabled us to do the walk without having to retrace our steps (parking at 43/321883). Shortly after setting off we passed a stone wall on which could be seen several cristate *Asplenium scolopendrium* and close by the river *Polypodium interjectum*. Our walk alternated between the riverbank and old mill dams – a number of which are now drained, silted and populated with alder trees – and the derelict stone wheel-housings and leets. Many of these structures supported *Asplenium scolopendrium*, *Blechnum spicant*, *Dryopteris dilatata*, *D. filix-mas*, *D. affinis* subsp. *borreri* and *Athyrium filix-femina*. On the riverbank we spotted some occasional *Dryopteris affinis* subsp. *affinis* and a possible *D. affinis* subsp. *borreri* '*insolens*'. Extensive colonies of some tall and well-branched *Equisetum fluviatile* were seen in the mill dams that were only partially silted. *E. arvense* was also seen around the margins.

photo: P.I. Ruston

In the car park in the Rivelin valley

Bruce Brown, Ann Robbins, Alison Evans, Bridget Laue, Paul Sharp, Barry Wright

SOUTH-EAST

Merriments Gardens (Hurst Green), Nap Wood (Mark Cross), Eridge Rocks (Eridge Green) (all East Sussex) and Tea Garden Farm (near High Rocks) (Kent) – 11 June (Leader: Paul Ripley)

Paul Ripley

Thirteen members and a potential new member, Sophie Miller, met at Merriments Gardens (51/738280). This is a thriving garden centre, but with a most attractive open garden laid out on the Wadhurst clay of the High Weald. There was very little shade, but moisture-loving ferns such as *Onoclea sensibilis* and *Matteuccia struthiopteris* were flourishing. All the plants we saw were well grown. *Polystichum setiferum* 'Pulcherrimum Bevis', *Dryopteris affinis* subsp. ?*cambrensis*, *D. goldiana*, and an attractive pot-grown *Dryopteris* collected by Roy Lancaster in Japan (was this *D. crassirhizoma*?), caught my eye. There was plenty in this garden to sustain our interest, although there were few ferns for sale in the nursery.

Access to Saxonbury Hill had been denied by the estate office and so we decided to cross the road to Nap Wood (51/582328). Here we were rewarded with a splendid range of ferns to delight both our newer members and older hands. Twenty-one years previously Clive Jermy had shown us the delights of this Sussex wood on the very first South-East meeting. Along the trail to the river we found a few clumps of *Oreopteris limbosperma* with *Athyrium filix-femina* and *Blechnum spicant*. *Pteridium aquilinum* was abundant in the woods. Approaching the river we found *Dryopteris carthusiana* to compare with *D. dilatata* along with the suspected hybrid *D.* x *deweveri*. *D. affinis* subspp. *affinis* and *borreri* also grew close by, reaching a height of nearly two metres in places. The delight, however, came in a long bank of *D. aemula*, which just invited photography.

At Eridge Rocks (51/556356) we immediately had to squeeze through a tight crevice to admire a small quantity of *Hymenophyllum tunbrigense*. Some members climbed on top of the rocks and made their way along the top finding *Polypodium interjectum*; others went along the bottom to find the other two large colonies of *Hymenophyllum tunbrigense*, which were in far better health in this damper part of the rocks. We really could do with some slightly damper springs to promote greater growth of this rather special plant of the Weald.

Tea Garden Farm (51/559384) lies opposite the famous High Rocks, once a site for *H. tunbrigense* but long since denuded of most of its ferns. High Rocks is in East Sussex, but Tea Garden Farm lies just inside Kent. Behind the farm and an outdoor riding school lies a 'wall' of Tunbridge Wells sandstone. On this 'wall' and in the woodland beyond we found a number of good plants of *Polystichum aculeatum* (the second site in Kent), three plants of *Osmunda regalis*, *Asplenium scolopendrium*, *Blechnum spicant*, *Athyrium filix-femina*, *Pteridium aquilinum*, *Dryopteris filix-mas*, *D. dilatata*, *D. affinis* subsp. *borreri*, and a candidate for *D.* x *complexa*. On the walls of the riding school and outbuildings *Asplenium scolopendrium* was abundant. Alas, like Francis Rose before us, we found no *Hymenophyllum*, but this was a fascinating and rich site, and we are most grateful to Anne and David Preston for allowing us free access and for providing us with tea afterwards.

Dungeness and Park Wood, Kent – 23 July

John Edgington

Fifteen ferners and a dog assembled at Denge Marsh RSPB Reserve (61/062195), where Paul Ripley would show us the only site for marsh fern in the area. The flora on Denge Beach between us and Dungeness Power Station in the distance was amazing - dodder (*Cuscuta epithymum*) twined around wood sage (*Teucrium scorodonium*), Nottingham catchfly (*Silene nutans*) was as abundant as anywhere in Britain, while blue viper's bugloss (*Echium vulgare*), yellow horned-poppy (*Glaucium flavum*) and pink centaury (*Centaurium erythraea*) studded the shingle. The first fern was *Azolla filiculoides* in one of the numerous ponds left by gravel extraction. After a mile of difficult walking Paul led us down to the edge of a reed bed and an

impressive stand of *Thelypteris palustris*. The plants were at all stages of development, from limp unfurling croziers to stiffly erect fertile fronds with ripe sporangia. Although the ground seemed bone-dry after the long drought, we searched around and soon found several other stands with many hundreds of plants, most of them hidden beneath the willow carr that signified a late stage of seral succession. Clearly the fern rhizomes had tapped an extensive waterlogged layer. Marsh fern is still, as Hanbury and Marshall wrote in *Flora of Kent* in 1899, "very fine and abundant here". *Dryopteris carthusiana* is also recorded hereabouts, and sure enough Andrew Leonard soon found a good specimen in one of the willow stands. On the way back, Trevor Lording noticed many plants of Jersey cudweed (*Gnaphalium luteoalbum*) beside the track. Dungeness is only its second British site and this is an encouraging extension of the small colony found in 1996 and believed to have been bird-sown from French sources.

Following a debate between Pat Acock and Tim Pyner as to whether *Equisetum* x *litorale* was amongst *E. arvense*, *E. fluviatile* and *E. palustre* in a roadside ditch (on further examination, Pat could not confirm the hybrid), and admiration of a nearby marshmallow (*Althaea officinalis*), beer was enjoyed by some, and fish and chips by others, at the deservedly-popular Pilot Inn. After lunch we drove through Dymchurch to Park Wood (61 047363), part of a stretch of acid woodland intersected by small streams on the low cliffs that bounded Romney Marsh before it was drained. After admiring *Equisetum telmateia* at the roadside, and *Polystichum setiferum* and *Asplenium scolopendrium* suggestive of some basic enrichment beside a small tributary rill, we struck upstream for a feast of woodland ferns – *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. dilatata*, several probable *D. affinis* subsp. *borreri*, an undoubted *D.* x *complexa* with shiny, rippled fronds, the right sort of basiscopic pinnules (and, as subsequently checked, about 70% of the spores aborted and misshapen), more *P. setiferum* and *A. scolopendrium* and a few rich colonies of *Blechnum spicant* – not to mention *Pteridium aquilinum*. The party was persuaded, reluctantly, to turn back and head downstream. Passing a polypody that was unanimously (three out of three voters) declared to be *Polypodium interjectum*, and further examples of *D.* x *complexa*, we found what Paul had saved for last – a single but utterly unmistakeable *Polystichum aculeatum*.

Sated by eighteen pteridophytes, we descended on Paul's most hospitable and generous friends Hilary and Charles Sell for a sumptuous tea and leisurely reflections on a very rewarding day.

Great Comp Garden, Crouch, and Patrick Acock's house, St Mary Cray, Kent – 29 October

Paul Ripley

Sixteen members (and a seventeenth joined us later) met at Great Comp, near Borough Green, Kent (51/633567). This six-acre garden, with its creative 'ruins' is very largely the creation of the owner Roderick Cameron and his late wife. Mr Cameron kindly gave us a brief history. They bought the house in 1971; the previous owner had been a Miss Maxwell, a redoubtable lady, founder of the English Women's Hockey and Cricket Associations and gentian enthusiast, who died while collecting specimens in Switzerland at the age of 90. The gardens are a pleasing mixture of interlinked gardens, in the English style, set amid a variety of specimen trees. Ferns are grown in a number of beds, especially around the 'ruins'. Particularly impressive were well grown *Cyrtomium falcatum*, a fine *Dryopteris wallichiana*, an attractive *Polypodium cambricum* variety ('Pulcherrimum' or 'Wilharris'?) and a number of *Asplenium scolopendrium* and *Polystichum* varieties.

Pat and Grace Acock had very kindly offered to provide lunch, so we moved to their house and admired the fascinating garden. Patrick has a unique collection of horsetails, but also a great variety of other interesting plants. *Cheilanthes acrostica*, *Asplenium* (*Ceterach*) *aureum*, *Polystichum lonchitis* and the beautiful *P. omeiense* caught my eye. Pat has created a variety of habitats – including a cold greenhouse, which enables a very wide range of ferns to be grown. After tea we were able to look at a very fine book of pressed fern fronds

from New Zealand, brought by Jonathan Bryant, and some slide presentations. Pat showed slides from the BPS 'Feast in the East' trip to New England, and ferns from the Alps on the border between France and Italy. Paul Ripley showed a taster of the ferns of Réunion, where a BPS meeting is scheduled for October 2006, and Howard Matthews presented some particularly fine photographs taken on a recent visit to Iceland.

We are very grateful to many members who brought ferns and plants to give away, but particularly to Grace and Pat Acock for organising such a successful day and for providing us with wonderful and extremely generous hospitality.

EAST ANGLIA

Indoor Meeting, Lowestoft, Suffolk – 22 January — Rosemary Stevenson

A large group of 23 members and friends met at midday in the home of Gill and Bryan Smith and were soon enjoying one of Gill's splendid lunches.

Our guest speaker was Martin Rickard, a past President of the BPS. He regaled us with a host of interesting and amusing anecdotes about members he has known from the time he joined the Society in 1967 up to the present day. His talk was illustrated with slides mainly taken during fern meetings both in the UK and abroad. Martin paid particular tribute to Jimmy Dyce, without whose drive and determination after World War II the BPS would have folded. He expressed the delight we all felt at having Betty Dyce with us for this meeting. With the help of Martin's slides and his humorous commentary it was for many of us a chance at last to put faces to the countless familiar BPS names from the 1960s and '70s through to more recent times, and to learn the parts they have played as the Society has evolved.

During our visit we were able to admire Gill and Bryan's fern collection, both in the garden and indoors, as well as the many ferny artefacts decorating the house. Martin had also brought a collection of interesting fern-related items. His wonderful New Zealand fern albums with their intricately inlaid native-wood covers – one by the famous Seuffert firm – took pride of place, while a curiosity was a collection of Horticultural Medals won by E.J. Lowe, the Victorian writer on ferns.

Our thanks go to Gill and Bryan Smith and Martin Rickard for giving us all such a thoroughly enjoyable day.

Aldeburgh, Suffolk – 24 May — Anne Beaufoy

Thirteen members met at The Exotic Garden Company's outlet at Aldeburgh, but the range of tree-ferns and palms there was less extensive than usual as another shipment was awaited.

We moved to the car park at the edge of the RSPB North Warren reserve (62/455587), inland from Thorpeness Mere. A delightful walk across the heathland took us to a wooded area with wetter carr. Adding a wider interest to the usual dry land flora were *Corydalis claviculata* and *Montia perfoliata.* We were interested to note how the ubiquitous bracken's spring development had varied according to its site. In the sheltered woodland the fronds were expanding well, whilst some on the less protected pathway had been frost-bitten. In the most open and coldest heathland parts, the croziers were still judiciously only at ground level.

The main object of our search, *Osmunda regalis*, eluded us. Although it has not been seen since the carr was flattened in the 1987 storm, it could well still survive, hidden, such is the impenetrable jungle there now. A winter visit, with better visibility through the vegetation, might be a better hunting time. However, we found some good specimens of *Dryopteris carthusiana*, *D. dilatata*, *D. filix-mas* and *Athyrium filix-femina. Equisetum fluviatile* and *E. palustris* were growing in a reed bed.

After a picnic lunch, we repaired to a coastal strip north of Aldeburgh known as The Haven (62/466579), a recorded site for *Ophioglossum vulgatum*. The plant duly obliged, found in a grassy sward to the west of the road but not on the very dry opposite side by the shingle beach. On the beach were clumps of the later flowering yellow horned-poppy and sea pea. We concluded our excursion with a visit to the Ladybird Nursery in Snape.

Flordon Common and North Walsham, Norfolk – 25 June **Tim Pyner**

Flordon Common (62/181974), south-west of Norwich, is an SSSI managed by South Norfolk District Council and comprises open fen and broad-leaved woodland. Nine members gathered at this interesting site on a cloudy and unseasonably chilly day. Our group was shown around the site by the wardens, Pat and Janet Neagle, who explained the management regime, which is predominantly by cattle grazing. Although pteridological interest was limited, the overall flora was impressive. Orchids were common, mainly southern marsh but also common spotted, heath spotted, bee orchids and marsh helleborine. Adder's-tongue (*Ophioglossum vulgatum*) has been recorded in the past and was duly re-found by a sharp-eyed member. The only other pteridophyte present was marsh horsetail (*Equisetum palustre*), which occurs throughout the site. Barrie Stevenson spotted a swallowtail butterfly perched on a southern marsh orchid, which caused a lot of excitement as apparently it has not been seen here before. Probably due to the cold conditions, it remained on the orchid for some time, opening and closing its wings, allowing everyone to take photographs.

After a picnic lunch, we drove to the garden of BPS member Lionel Ponder in North Walsham. Despite being near the north coast of Norfolk, Lionel has created a haven for exotic and tender plants. The garden is protected by high hedges that help create a very sheltered microclimate. Palms, bananas, cannas and agaves were prominent and remain outside over winter. Lionel has created an amazing fernery, which is watered by an overhead spray system that he has designed and constructed. Despite being under conifers in a very dry part of the country, the ferns are thriving. It certainly demonstrates the importance of irrigation when growing ferns in inhospitable areas such as East Anglia. Several large *Dicksonia antarctica* were prominent and the more common ferns such as *Dryopteris affinis* and *D. wallichiana* were very large. Amongst these ferns, nice examples of rarer species such *Polystichum richardii* and *P. stenophyllum* occurred. One corner had a large colony of *Cystopteris bulbifera*, with a large specimen of *Woodwardia radicans* in a container nearby. Other interesting ferns that I noticed included *Woodwardia fimbriata*, *Matteuccia orientalis* and a large clump of *Lastreopsis glabella*. Lionel and friends provided a delicious tea for the group. The memory of his extraordinary garden will remain with me for a long time.

Chalkney Wood, near Earls Colne and Beth Chatto's Gardens and Nursery, Elmstead Market, Essex – 24 September **Marie & Geoffrey Winder**

It is ten years since our group last met at Chalkney Wood (52.871273). This time members of the South-East Group joined us. Reports tell us that this ancient 81 hectare (200 acre) deciduous wood south of the river Colne, transected by a Romano-British road, remained much the same in shape and area from medieval times until the 1950s when two thirds of the wood was felled and planted with conifers. This area has since been restored to deciduous woodland. The topsoils are a mixture of sand and loess in varying proportions overlying clays.

We entered the wood from the small road forming its south-west boundary. In this area in particular, which was not replanted in the 1950s, there were many lime trees, including the small-leaved lime (*Tilia cordata*); other trees in the wood included hornbeam, sweet chestnut; silver birch, oak and elm. We saw large trees that had been coppiced in the past but few signs of recent work. In the undergrowth were brambles with sedges, wood sorrel, wood rush, teasel, dock etc. *Dryopteris affinis* subsp *borreri*, *D. dilatata* (both on the woodland floor

and on rotting tree stumps), *D. filix-mas*, *D. carthusiana* and *Athyrium filix-femina* were found in places but not in vast numbers. Probable hybrids between *Dryopteris carthusiana* and *D. dilatata* (*D.* x *deweveri*) were suspected in some places where the appropriate parent species grew in proximity to each other. In the north-east of the wood there were moister areas, some obviously acidic, as bracken (*Pteridium aquilinum*) and other 'indicator' plants were growing there. *Equisetum arvense* was found in a few places. Around midday we made our way along the Roman road and joined the footpath back to the entrance and our cars.

photo: B.D. Smith

Chalkney Wood, Earls Colne, Essex

Jack Hubert, Paul Ripley, Maggie Kilcoyne, Howard Matthews, Lesley Williams, Patrick Acock, Graham Ackers, Gerry Downey, Karen Munyard, Jennifer Ide, Steve Munyard, Tim Pyner, Geoffrey & MarieWinder, Peter Clare, Peter Tindley, Vivien Green, Barrie Stevenson, Gill Smith, Rosemary Stevenson, Bryan Smith

After a picnic lunch, we drove to Beth Chatto's gardens and nursery at Elmstead Market. In front of the nursery is the gravel garden, a very dry, well drained area receiving no water other than the average 20 inches annual rainfall and planted with drought-loving plants such as various alliums, kniphofias, verbascums, flowering grasses, ballota, lavandula and santolina. Very interesting, but devoid of ferns. The main gardens follow a shallow hollow or valley, in which a small stream has been dammed to form ponds. Moisture-loving plants such as *Gunnera tinctoria* and the ferns *Matteuccia struthiopteris*, *Onoclea sensibilis* and *Osmunda regalis* grow especially well along the edges of these ponds. Higher up the sides, where it is drier and perhaps more sheltered, the planting includes ferns such as varieties of *Polystichum setiferum* and *Dryopteris filix-mas*. The lower end of the garden is more wooded and this is reflected in the character of the planting - we could not find the good *Woodwardia* seen on a previous visit, but Tim Pyner told us that he had found a single specimen. *Colchicum* and *Cyclamen hederifolium* have been planted in grass close to the paths leading up to the nursery and were already doing well - they should be a fine sight in a few years time. The nursery itself offers an extensive range of perennials and other plants, including a range of ferns.

Autumn Indoor Meeting, Barrow, Suffolk – 22 October **Barrie Stevenson**

At the time of going to press, we look forward to our annual visit to Marie and Geoffrey Winder's home to enjoy a relaxing afternoon and evening viewing ferny images contributed by members, buying plants at a fern bring-and-buy sale, viewing any new fern-related artefacts that members have recently acquired and reminiscing about the year's meetings. We shall, no doubt, also enjoy the superb refreshments that traditionally round off the season.

NORTH-WEST

Bellingham, Northumberland – 17-19 June

We spent a remarkable weekend based at Bellingham. Alec Tate had the idea, and made the arrangements; Ken Trewren led us in the field. This was a joint meeting of the North-West Group and the Leeds and District Group, attended by 24 people. We saw some exceptional rarities.

Friday 17th **Martin Rickard**

Our group of just over 20 met for lunch at the wonderful old-fashioned estate pub in the village of Blanchland. This was a good start but after lunch things got even better when Ken Trewren led us up the valley of the Beldon Burn to the site of the old mine workings at Beldon Shields (35/928496) where we shown a few plants of *Asplenium septentrionale*, while just a few feet away in the short turf were a few rather small plants of *Botrychium lunaria*, and locally on old masonry masses of *Cystopteris fragilis*. In total, after an enjoyable scramble, nine fern taxa were seen around the workings.

Across the river (burn!), a few yards away, lay County Durham, a county where *A. septentrionale* is unknown. Of course we determined to find it – but failed! The aspect was wrong; where rock outcropped it was shady, quite unlike the sunny rocks favoured by the forked spleenwort found on the Northumberland side of the river. However, the search of the Durham bank did reveal some interesting additional species, notably *Gymnocarpium dryopteris*, *Phegopteris connectilis* and *Equisetum sylvaticum*, in total 13 different taxa.

In the evening we retired to the centre hotel in Bellingham, where a most enjoyable group dinner rounded off a perfect day.

Saturday 18th **Martin Rickard**

The next morning we set off walking along the wooded valley of the Hareshaw Linn (35/842853), just north of Bellingham. In bright sunlight the rocky stream provided a most attractive setting for a good range of 18 ferns and fern allies. Of interest were *Phegopteris connectilis*, *Gymnocarpium dryo*pteris, *Dryopteris carthusiana*, and Ken Trewren found gametophytes of *Trichomanes speciosum*, but curiously only one subspecies of *Dryopteris affinis* viz. *borreri*. The target of the morning's excursion was to see *Asplenium trichomanes* subsp. *pachyrachis* var. *trogyense* (synonym *A. czikii* subsp. *trogyense*). Eventually we found it in abundance at the foot of an overhanging sandstone cliff by the side of the main waterfall. 'Trogyense' was first discovered in 1872 hundreds of miles away in Monmouthshire on Cas Trogy by a Mr Pierce. It has since been found in one or two mortared walls elsewhere in Monmouthshire and Herefordshire but nowhere else to my knowledge. How could it also be here? A further complication is that the site is a rock cliff of a type of sandstone, although apparently lime-rich. We mused over the ecology of this fascinating site before walking back to the cars wondering where 'Trogyense' will turn up next.

After lunch, we drove back past the hotel up the valley towards Kielder before turning off onto forestry roads. We finally arrived at a steep wooded site by the side of the Chirdon Burn (35/747815) where Ken Trewren showed us the very uncommon horsetail, *Equisetum* x *trachyodon*. It was scattered in the long grass and bushes by the side of the river in a site that must be inundated in times of flood. This was not an easy area to move about in and midges were abundant, but with time on our side some of us set off alongside the river to see what else we might find. It was quite a ferny site with 16 ferns and allies recorded, none of great significance but it was pleasing to see *Phegopteris connectilis*, *Gymnocarpium dryopteris* and *Dryopteris carthusiana* for the second time that day. Shady rocks by Jerry's Linn, a wonderful waterfall, were searched for *Trichomanes speciosum* gametophytes without success. In contrast to the morning we found two subspecies of *Dryopteris affinis* – *affinis* and *cambrensis*, but no *borreri*!

Despite the unpromising nature of the terrain for filmy ferns we were told of rumours of *Hymenophyllum tunbrigense* growing nearby. Tempted, we drove about a mile down another forest track. We found the rocks (35/733838) but most were rather sunny and we failed to find the filmy fern. It might be there, but we rather doubt it; the record was only a rumour. It is often worth following up old records; even when you fail with the main object, nice surprises can occur. Our surprise here fell to Robert Sykes who found a strong colony of perhaps eight plants of *Blechnum spicant* 'Imbricatum' sheltering under a rock. This is a pretty little fern with four-inch long, somewhat leathery fronds and densely packed, overlapping pinnae. The last plant I saw of anything similar was found by Nigel Hall in Snowdonia in the 1970s. A very fitting climax to the day.

Sunday 19th

The party split into two. Some went to Deadwater Fell and some to Cragside Gardens.

Deadwater Fell

Bruce Brown

Eleven of us elected for the high level route, but were fortunate in being allowed to drive cars on the well maintained forest tracks right up to the summit of Deadwater Fell at 571 metres (35/626972). On a hot humid day the breeze up here was very welcome. The rocky summit edge was home to the *Dryopteris* species we had come to view. Alongside *D. dilatata* were *D. expansa* fronds, recognisable by their finer cut 'lacier' appearance, flat pinnule edges and uniformly pale brown rachis scales. Occasional plants, larger, intermediate in appearance and with small darker areas to the rachis scales were deduced to be the hybrid *D.* x *ambroseae*. Ken Trewren has previously studied these colonies and confirmed their identities by examination of ripe spores.

A two-kilometre tramp over rough boggy moorland, with emerging northern eggar moths providing interest en route, brought us to our next location in Williams Cleugh (35/639991), which has a colony of the rare *Diphasiastrum* x *issleri*. A bare gravelly area enabled us to initially spot the clubmoss, but its main growth was seen to be in the adjacent heather over an area of around ten metres squared, and with lots of cones developing at the time of our visit. Some *Huperzia selago* was also present and about 50 metres away was a colony of *D. alpinum*, which allowed comparisons to be made. Superficially the diphasiastrums appear similar; one has to look out for slight differences in leaf structure, flatter shoots, a less glaucous, more yellowy green appearance and pedunculate cones in *D.* x *issleri*.

It was another rough plod back to the cars, but we were pleased to have been able to see these rare species growing well in their bleak environment. Thank you Ken.

Cragside Gardens

Marti Martin

On the hottest day of the year so far, eight members visited Cragside Gardens (National Trust; 46/073022). We were met by the Head Gardener, Andrew Sawyer, who had kindly given up his Sunday morning to show us part of the gardens of particular ferny interest.

Andrew led us to the Top Terrace in the Formal Garden and into the Tropical Fernery, which is actually outside and not under glass, the glasshouse having been removed in the 1920s and the areas divided up to give the atmosphere of its original content. Here we found a well kept rockery and members were particularly interested in *Adiantum aleuticum*, *A. hispidulum*, *Asplenium marinum* and *Dryopteris wallichiana*. We noted a number of *Cheilanthes*, namely *argentea*, *eatonii*, *eckloniana*, *myriophylla*, *sieberi* and *tomentosa*, planted out in pots – Andrew had given them monthly seaweed feed and overwintered them under cold glass. Andrew also showed us *Dryopteris sieboldii*, which he admitted to having a struggle with. There was a fine show of *Blechnum penna-marina* subsp. *alpina*, making a nice contrast of young red fronds against the green of the other ferns.

In the Temperate Fernery, a winding path through rock gullies (also outside). Andrew showed us *Woodsia ilvensis*, and told us of the problems they had in trying to keep plant damage to a minimum, as this area was very popular with children climbing on the rocks. He patiently answered our multitude of questions and was very helpful and knowledgeable in identifying plants, as there were no plant labels; since they removed visible labelling, theft of plants had been dramatically reduced.

By midday, the heat was searing, and having thanked Andrew for generously giving up his time (and some cuttings!), we checked our watches against the sundial and sought shade for lunch. We split up to go our separate ways, with some going on to visit Alnwick Castle garden.

Leck Beck Head, South Cumbria – 9 July **Frances Haigh**

Leck Beck Head SSSI is about seven kilometres north-east of Kirkby Lonsdale. Peaty moorland overlies Carboniferous limestone and there are many potholes in the vicinity. Most of our walk was at a height of around 300 metres. All the area we covered has been designated open access land.

After meeting at Bull Pot Farm (34/662814), now caving club premises, 15 of us walked south, passing *Dryopteris filix-mas* and *Athyrium filix-femina*. A couple of pothole openings revealed *Polystichum aculeatum* and *Cystopteris fragilis*, with *Dryopteris dilatata* and *Blechnum spicant* growing in the peaty soil above the limestone. A limekiln gave us *Asplenium trichomanes* subsp. *quadrivalens*. Once down in the valley of Ease Gill, with its dry waterfall and high tree-shaded rock walls, we came across *A. ruta-muraria*, *A. scolopendrium*, more *A. trichomanes*, plenty of *Polystichum aculeatum* and *Polypodium interjectum*. The beck bed had a little *Equisetum arvense*.

photo: M. Hayward

Pothole entrance at Leck Beck Head, Cumbria

Thelma Tate, Frances Haigh, Alison Evans, Martin Harrison,
Barry Colville, Alec Tate, Joan Hindle, Peter Campion

Next came a short scramble through plentiful robust *Pteridium aquilinum* that was cunningly hiding some large rocks. Nearby exposed areas of limestone gave us our first *Asplenium viride* and *Gymnocarpium robertianum*. We wandered up the beck examining the frequent low cliffs, which gave us plenty more of the limestone-loving ferns already seen and also *Polypodium vulgare*. The delicate fronds of *Cystopteris fragilis* were particularly abundant. Amongst an

area of loose blocks of limestone were several groups of *Dryopteris submontana*, their characteristic grey-green fronds showing above the crevices in which they grow.

Our way now passed through vigorous stands of *Oreopteris limbosperma* and *Dryopteris affinis*, with some *D. filix-mas*, *D. dilatata* and *Athyrium filix-femina*. Despite scrutinising several suitable looking plants we didn't feel that we could identify *Dryopteris carthusiana* for certain. Eventually we reached more wonderful rock scenery with a waterfall dropping into a hidden pool without an outlet. Nearby was a good show of purple-flowered *Pinguicula vulgaris* (butterwort). Another short climb led us to the bridge where we would leave the valley but not before we had found *Selaginella selaginoides*, quite easily spotted because of its small yellowy cones, in a wet area by the beck. On the far side of the bridge were several examples of crested *Pteridium aquilinum*. A mile walk over rough, rather damp moorland took us back to the cars.

photo: F. Haigh

North-West Group at Leck Beck, Cumbria

Barry Colville, Denise Copson, Michael Hayward, Roy Copson, Alec & Thelma Tate, Melville Thomson, Chris Evans, Bruce Brown, Martin Harrison, Alison Evans (& Bracken), John Grue, Joan Hindle, Peter Campion

Bruce Brown and Michael Hayward then decided to search for *Phegopteris connectilis*, known to be present in Ay Gill about half a kilometre north of Bull Pot, on the descent towards Barbondale. They reported finding it in two places.

(Acknowledgement must be given to Barry Wright, whose expedition in 1987 gave me the idea of this location for field studies. However, we failed to find the *Huperzia selago* and *Dryopteris carthusiana* that he recorded.)

Eskdale and Wasdale, South Cumbria – 6 August **Mike Porter**

Nineteen BPS members and friends, drawn from the North-West and Leeds Groups, met at Forge Bridge, Eskdale (34/148995) on a cloudy but improving morning to look at some of the fern sites of this western corner of the Lake District. Milkingsteads Wood, our first site of the day, is situated only a little above sea level in the middle of Eskdale and is an attractive mix of boggy woodland and steep craggy outcrops.

Entering the wood we noticed at once the damage caused by the gales that had battered Cumbria in early January, access to one of the best crags being obstructed by fallen trees.

However, we quickly found two of the species for which the wood is well known – *Hymenophyllum tunbrigense* and *H. wilsonii*. These two filmy ferns have an interesting distribution in Cumbria, *H. wilsonii* being widespread, particularly in the Lake District, while, apart from a recently discovered site in the far north of the county, *H. tunbrigense* is more or less confined to Eskdale, where it is frequent. The two grow close together on crags at this lower end of Milkingsteads Wood but elsewhere in the wood *H. tunbrigense* is much the more common. There was considerable opportunity to compare the round, toothed indusium of *H. tunbrigense* with the more oval, untoothed indusium of *H. wilsonii*, but our investigations revealed nothing suggesting hybridisation between the two. We now penetrated further into the wood to find one of the rare ferns of Cumbria – *Dryopteris aemula*. The scarcity of this plant in Cumbria (there are only four sites) is puzzling since it often thrives in damp westerly woodland of which Cumbria has an abundance. Milkingsteads Wood has long been known as the home of this fern but of late its numbers have been much reduced with only a handful of plants growing in a gully on a craggy buttress. However, a few more plants had been found shortly before this meeting and others were discovered during the meeting itself, growing close together on the same craggy buttress and appearing to be in good health and, encouragingly, of varying ages.

photo: M.S. Porter

***Dryopteris aemula* in Milkingsteads Wood, Eskdale**

Other ferns seen during the morning included *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris dilatata*, *D. filix-mas*, *D. affinis* (subspp. *affinis* and *borreri*), abundant *Oreopteris limbosperma*, *Phegopteris connectilis*, *Polypodium interjectum*, *P. vulgatum* and, of course, ***Pteridium aquilinum***.

Lunch was taken, according to taste, either by the cars or in the handily-placed *King George IV*, after which the group moved on to Cumbria's best *Pilularia globulifera* site, Flass Tarn in Wasdale (35/129034). This site also provides a mystery in that, for some years, *Pilularia* has thrived in either the main tarn or in a subsidiary pool a short distance away, never in both. At a visit made to this spot in 2002 most of the *Pilularia* was in the subsidiary pool with the main tarn seeming to have lost most of its plants as a result of the dense growth of *Carex rostrata*. However, on this occasion the main tarn held an excellent colony growing densely all the way round the edges, in some places almost forming a sward. Any hopes that the same situation would apply in the subsidiary pool were swiftly dashed when it was found that the pool itself had disappeared, leaving only a slightly damp hollow! Our hopes

are that this pool will fill up again with the winter rains and that the *Pilularia* will survive this period of drying out and re-appear next year.

Our last site of the day, Greendale Mires, situated a little way from Wastwater and with stunning views of The Screes plunging into the lake, holds a small, scattered colony of *Lycopodiella inundata* at its second Cumbrian site. Careful examination of the area suggested numbers might be increasing but only slowly. The signs are encouraging, nevertheless, as Greendale Mires is extremely wet and its community of scarce and interesting plants (which includes *Drosera intermedia*, *Hammarbya paludosa* and *Hypericum elodes*) seems unlikely to suffer any disturbance.

Additional ferns seen during the afternoon included *Asplenium adiantum-nigrum*, *A. ruta-muraria*, *A. trichomanes* subsp. *quadrivalens*, *A. scolopendrium* and *Cryptogramma crispa*.

photo: R.W. Sykes

North-West Group at Wasdale

Back: Ann Robbins, Chris Evans, Mike Porter, Ann Haskins,
Next row: Alison Evans, Bruce Brown, Alec Tate, Geoff Wilkins
Next row: Joan Hindle, Thelma Tate, John & Anne Grue,
Front: Barry & Anne Wright, Melville Thomson, Julia Wilkins

Hawkshead, South Cumbria – 3 September

Joan Hindle

This was a repeat visit to a variety of habitats led by my late husband Peter in 1998. The area included a car park wall, a churchyard, woodland and open fellside up to a height of 200 metres. Rainfall is high and the soils mainly acid. Fourteen members attended.

Growing in the mortared wall of a small car park (34/353981) we found *Asplenium trichomanes* subsp. *quadrivalens*, *A. scolopendrium*, *A. ruta-muraria*, *A. ceterach* and *Polypodium interjectum* in good condition. There was some discussion as to whether the *Polypodium* was *P. vulgare*, but the conclusion was *P. interjectum*.

In the churchyard, members were interested in clumps of *Athyrium filix-femina*, some of which were crested and there was one 'Setigerum'. There was also a crested *Dryopteris filix-mas*. *Onoclea sensibilis* was thought to be a garden escape. *Cystopteris fragilis* was there, but not in such profusion as previously. We ascended the fairly steep woodland path seeing *Dryopteris*

dilatata, *Oreopteris limbosperma*, and *Dryopteris affinis*. Higher up, *Oreopteris limbosperma* was very much to the fore, but interest was centred on the *Blechnum spicant*. Specimens were found that were crested on both fertile and sterile fronds. *Phegopteris connectilis* was well represented, but only one specimen of *Asplenium scolopendrium* was found.

Lunch was taken at Goosey Foot Tarn (34/338970), man-made and very acid from the pine trees around it. On exploring, members found *Dryopteris carthusiana*, *D. dilatata*, *Equisetum fluviatile* and *E. arvense*. Moving to further woodland (34/353967) gave us *Gymnocarpium dryopteris* and *Phegopteris connectilis* close together. Here three members negotiated the steep ravine and crossed the stream to examine *Polystichum aculeatum* growing well on the far bank.

On our way back to Hawkshead we admired the garden walls covered with *Polypodium vulgare*. We went on to Ann and Barry Colville's home. In their beautiful garden they have a number of ferns, notably a magnificent *Blechnum spicant* and *Osmunda regalis* growing by a stream, but sadly the fine patch of *Lycopodium clavatum*, which until recently grew in their lawn, has shrivelled and appears dead. We partook of a scrumptious tea for which we were most grateful. The weather had been perfect and we had had a most enjoyable day.

Annual General Meeting, Holehird, South Cumbria – 6 October Robert Sykes

We always mingle our – not very onerous – business, with pleasure, and spend an enjoyable day in the members' room at Holehird (the garden of the Lake District Horticultural Society), listening to lectures, buying off the plant stall, admiring the exhibits in the competition and generally talking ferns. Forty-one attended this year – many more and we must find a new venue! Among other displays, Alec Greening, a new member, brought some fronds from his garden for identification and Mike Hayward showed us the admirable tryptich he had made for the Southport Flower Show.

We were delighted this year to hear Clive Jermy talk about 'European Ferns'. He is against the stamp-collecting school of fern hunting. So to help us understand why things grow where they do, and how ferns are related to each other, he took us through a rapid tour of the palaeogeography of Europe, and the work of Irene Manton and her successors on the genetics of fern evolution. Only then were we allowed to see his excellent slides of ferns and their 'allies' (notably *Isoetes* species), and the often unpromising places where they grow. He compressed a vast amount of material into a small compass, but it was very clear, skilfully pitched to our level and well illustrated. We were left hoping that (after completing his current work on sedges, and seeing a new edition of *The Illustrated Field Guide* through the press), he would write a popular account of the natural history of ferns.

In the afternoon Sally Beamish, the head gardener at Ruskin's old home Brantwood, across the lake from Coniston, gave us an illustrated talk on Pteridomania. She surveyed the historic uses made of ferns and then looked at the Victorian Fern Craze, from Francis's seminal *Analysis of the British Ferns* in 1837 through Wardian cases and the avid collection (sometimes depredation) of ferns, to the formation of our Society at the turn of the century. She finished by showing slides of some of the gardens that were influenced by the craze and are still in existence.

Jack Garstang judged the two fern classes for an indoor fern and a hardy fern: Ken Trewren won them both! Mike Porter, last year's winner, set the competition, which was won by Frances Haigh.

Many of us took the opportunity to enjoy the National Collection of polystichums, assembled and still cared for by Cynthia Kelsall (though she admitted she is in her 80th year and put in a plea for a successor). The 'Drueryi' is looking particularly fine, with several large fronds and a little enclosure to protect it from the rabbits.

Our grateful thanks to the speakers, and to all those who quietly contributed to this delightful day.

BOTANICAL CORNWALL GROUP

Ian Bennallick

As with 2004, 2005 again saw a varied selection of field meetings covering all parts of the county. Other groups, including the Wild Flower Society and Plantlife, also organised meetings in which the Botanical Cornwall Group (BCG) and its members took part. Meetings from October 2005 through to the early part of 2006 were organised to search for the older records of rarer fern species as part of the Cornwall Rare Plant Register Project. The following is a brief rundown of the more notable fern records on meetings.

Windmill Farm and Ruan Pool, The Lizard (10/6915), and Kynance Cove (10/6813) and Lizard Point (10/7011) – 7 May

This meeting was organised by BCG for Plantlife members. A large group met at Windmill Farm, a Cornwall Wildlife Trust and Cornwall Bird-Watching and Preservation Society joint nature reserve, a former farm now managed for wildlife. Several new ponds and scrapes had been created and only a year before *Pilularia globulifera* appeared in one scrape. The aim of the morning was to see if *Pilularia* could be seen here. Ruan Pool, a historical site for *Pilularia*, had had a thick layer of vegetation scraped off the previous autumn (with funding from Plantlife), and it was hoped that the scraped ground and muddy margins could be searched for any re-appearing *Pilularia*. Unfortunately, the water level in Ruan Pool was too high, and the scrape had become covered with a thick soup of algae, so both places proved a blank!

In the afternoon the group met at the National Trust car park at Kynance Cove, with the aim of exploring the classic Lizard site for nationally rare plants, including *Isoetes histrix*. This was found in abundance on thin soils on the British Village slope (10/687138). Other species of note included some very interesting forms of *Asplenium adiantum-nigrum* growing on Serpentine rocks at Lawarnick Pit (10/682134) and *A. marinum* at the same site. The group then went on to Lizard Point, and in a Cornish hedge several fine clumps of *A. obovatum* subsp. *lanceolatum* were located on the west side of the road near the old lighthouse (10/703116).

Pennance Point (10/8030) and Pendennis Point and Castle, Falmouth (10/8231) – 25 May

Seven people met at Swanpool car park to do a circular walk around Pennance Point, with the aim of locating *Melittis melissophyllum* (bastard balm) and other rare species. The coastal path, shaded by the hardy coastal sycamore, ash and oak, was very ferny with *Dryopteris filix-mas*, *D. dilatata* and *Asplenium adiantum-nigrum* mingling with other woodland plants growing right up to the cliff edge. Bastard balm was located in a very atypical site for the species – on the edge of a low cliff where a small seepage emitted onto a wave-cut platform with small plants of *Osmunda regalis* in the crevices.

In the afternoon the group met in the car park of Pendennis Castle, which has a fine vantage point of the whole of Falmouth Bay and beyond. By now the weather had cleared to a gloriously warm and sunny day and in idyllic conditions we searched for spring vetch (*Vicia lathyroides*) at its only known Cornish site. This was found exactly where it had first been seen in the 1990s, on the stone ramparts of the fortification. These stone walls also had a very good fern flora with the typical species of this type of habitat in Cornwall being found, namely *Asplenium ruta-muraria*, *A. adiantum-nigrum*, *A. scolopendrium* and the small wall forms of *Polypodium interjectum* and *Dryopteris filix-mas*. This type of habitat can so often be lost when walls are re-pointed or cleaned, so it was good to see that English Heritage had not been too zealous in their management of the site!

Coombe Valley (21/2111) and Duckpool (21/2011), north of Bude – 12 June

The main aim of this meeting was to survey the woodland area for a good range of species. Coombe Valley is the only site that is regarded as native for monk's-hood (*Aconitum napellus*) in Cornwall; it was found in two places beside the river and proved to be the native subspecies. The valley also proved to be rich in fern species, with *Blechnum spicant*, *Dryopteris aemula*, *D. dilatata*, *D. filix-mas*, *D. affinis* subspp. *affinis* and *borreri* growing along the heathy rides. In marshy areas just inland from Duckpool, *Equisetum palustre* and *Osmunda regalis* were seen, both species new to the site. A nice group of *Asplenium ruta-muraria* and *A. trichomanes* subsp. *quadrivalens* plants on King William's Bridge added interest.

Stara Woods (20/2874), south-west of Launceston – 25 June

With permission from the owner to record in Stara Woods in the Lynher Valley, eight members descended down the steep wooded valley just north of Treovis (20/283740). On the shaded walls some plants of *Polystichum setiferum* 'Divisilobum' were examined. It was not certain that these had been introduced even though we were at the edge of a natural garden; they could easily have been naturally occurring plants. Further along, past much 'normal' *P. setiferum*, *Athyrium filix-femina* and very large-fronded *Dryopteris dilatata*, we reached the small stream. On one section of the stream, where it had eroded the soft rock below a hard rock layer, a small but steep waterfall and plunge pool of about 30 feet high had formed. This feature had created ideal humid conditions, hopefully, for filmy-ferns and after a little searching *Hymenophyllum tunbrigense* was indeed found on the rock sides with some large-fronded *Dryopteris aemula* plants. The lower, steeper part of the waterfall was explored by two of the group who managed to clamber down the slippery rocks and discovered huge sheets of *H. tunbrigense* on the dripping rock-face that the stream had created. Although this species is found in similar habitats only a few miles to the west on the edge of Bodmin Moor, this was a completely new site, and not in the granite areas where it is usually seen.

photo: I.J. Bennallick

Waterfall at Stara Wood
Tony Atkinson photographs
Hymenophyllum tunbrigense on rock-face

Not knowing what we might find, we wound our way along the stream to its confluence with the River Lynher. Further exploration of the moderately high riverside cliffs, rich in bryophytes, *Athyrium filix-femina* and *P. setiferum* (*P. aculeatum* was looked for but was not seen), revealed yet more patches of *H. tunbrigense*. Jenny Bousfield, who had arranged access and is local to the area, realised that she had seen *H. tunbrigense* before in another part of the wood several years before but hadn't recognised it. Further searches for *H. tunbrigense* in the Lynher Valley planned for 2006 may

prove successful, and if clefts and crevices are present in the rock-faces, the gametophyte of *Trichomanes speciosum* will be searched for.

Millbrook and Southdown Quarry (20/4352), near Plymouth – 23 July

Five members met at Millbrook on a wet and misty day. The aim of the meeting was to record the species associated with the less acid conditions associated with Devonian rocks in this part of Cornwall (which also contain small areas of Devonian Limestone). One of the areas to search was Southdown Quarry, a site of some interesting casual, alien and rare Cornwall natives, including the only site in Cornwall for narrow-leaved bird's-foot-trefoil (*Lotus glaber*). The quarry is extensive with a steep cliff or quarry-face. Over the years the scrub has encroached and vegetation increased, especially grey willow (*Salix cinerea* subsp. *oleifolia*) and bramble (*Rubus* agg.). At the time of our visit the scrub had been partially cleared, including much at the back of the quarry-face. It was because of this clearance that a most unexpected find was made - huge masses of *Adiantum capillus-veneris* all along the seepage area at the base of the cliff! Even for such a well-botanised quarry one can understand how the plants have been growing undetected for many years. It is the first record of a naturally occurring site for the species in 20/45; another colony was previously recorded on a damp cellar wall in Saltash.

Crowdy Reservoir (20/1483) and Rough Tor (20/1480), Bodmin Moor – 31 July

Eleven members met at Crowdy Reservoir in mist and rain with the aim of recording flowering plants, ferns and bryophytes. The previous meeting held for recording bryophytes at Rough Tor was a complete washout, so it was hoped that the weather this time would be better for the bryologists! The morning was spent exploring the margins of the reservoir and adding to the species list for the tetrad. Before the reservoir was created in the 1960s the bog, now submerged, had a population of bog orchid (*Hammarbya paludosa*) and it was hoped that this might have survived in small areas of bog around the edge. None were seen but on the edges of runnels large populations of oblong-leaved sundew (*Drosera intermedia*) and white beak-sedge (*Rhynchospora alba*) were present and the habitat was thought to be ideal for the orchid given a later survey date. It was a little late to look for *Botrychium lunaria* (last seen here in 1973) and we felt that even if it were present it would not have survived the myriad grazing sheep! Much of the unfenced grassy areas around the reservoir shore were as smooth as a bowling green. Another visit in the spring may well be successful. However, we did find *Equisetum fluviatile* around the reservoir edge.

The afternoon was more successful after a short walk to Rough Tor, Cornwall's second highest peak at 400 metres and a classic granite tor with plenty of crevices and sheer fissured faces. On some of the faces and in between the clitter, both *Hymenophyllum wilsonii* and *H. tunbrigense* were found in some abundance, and a few plants of *Dryopteris aemula* survived at the base of some of the more sheltered rocks. *Blechnum spicant* is common here but despite searching, no plants of *Huperzia selago* – seen in previous years – could be located.

Yeolmbridge (20/3187), near Launceston – 27 August

Yeolmbridge lies within the VC4 (North Devon) part of Cornwall, and this meeting was organised to update and add records to the tetrad in which it lies (20/38D). The most notable area for ferns seen were walls at Yeolmbridge associated with the bridge itself. *Asplenium ceterach*, *A. ruta-muraria*, *A. trichomanes* subsp. *quadrivalens*, *A. adiantum-nigrum*, *A. scolopendrium* and small plants of *Dryopteris filix-mas* and *Polypodium interjectum* all flourished on the section at 20/318874, and this selection is about as rich for ferns as it gets for a wall in Cornwall.

SCOTLAND

Royal Botanic Garden Edinburgh – 5 March

Frank McGavigan

(*Participants*: Senga Bremner, Adrian Dyer, Andy Ensoll, Mary Gibby, Tim Godfrey, Pieter Kastelein, Frank McGavigan, Heather McHaffie, Geoff Stevenson, Mike Taylor, Alastair Wardlaw.)

Andy Ensoll had apparently expressed surprise that we should want to visit the RBGE again but his huge collection of ferns there is so magnificent that I suspect that some of us would be happy to visit every week. He began by taking us on a tour of some of the exotic ferns that had been risked outside. *Cyathea dregei* plants were well wrapped up against winter cold and wet, and also, surprisingly, protected from the sun with white, reflective plastic 'hats'. *Lophosoria quadripinnata* was happily surviving its sixth winter outdoors with no protection at all. Even more astonishingly, *Todea barbara* was completely unscathed after its first winter outside. Remember this is Edinburgh, not renowned for its balmy climate.

Under glass, where warmer temperatures are guaranteed, the collection of ferns is breathtaking. Breathtaking indeed, for throughout our visit we were breathing in the proliferation of spores as they floated down from the tree-ferns. Not just the usual *Dicksonia antarctica*, *D. squarrosa*, *D. fibrosa*, *Cyathea medullaris* (now there's a breathtaking fern) and its fellow New Zealander *C. dealbata*, with *Culcita macrocarpa* from nearer home in south-west Europe and Macaronesia, but rarities such as *Dicksonia arborescens* with crispy fronds from St Helena (and in fact the type species of the genus), *Cyathea brownii* (*Sphaeropteris excelsa*) from Norfolk Island, *Sphaeropteris glauca* (*Cyathea contaminans* – aren't these names a nuisance?) from South-East Asia, *Cibotium glaucum* and *C. chamissoi*, both from Hawaii, *Calochlaena villosa* from South-East Asia, *Marattia fraxinea* from Africa, Madagascar and other Palaeotropical areas, the giant horsetail *Equisetum myriochaetum* from Central and South America, and that most magnificent fern *Thyrsopteris elegans* from the Juan Fernandez Islands. And these are just the ones that caught my eye.

The stipes and newly emerging croziers of several specimens, especially the cibotiums, were covered with fine brown hairs so thick and furry that inevitably we were drawn to stroke them. We always knew ferns were beautiful, but cuddly as well – this was a new experience. Protected under glass, the ferns do not of course suffer all the depredations they would experience in their native habitats, or so we thought. In fact Andy and his team have to cope with a wide range of pests and diseases, including cockroaches, of which I see no mention in my fern guide books. It slowly dawned that this man's genius is not down to some miracle but is the result of knowledge and experience, dedication and hard work, and above all, attention to detail. While we only saw beautiful ferns Andy saw faults – a little bit of dieback here, insect attack there, damaging drips from a leaking roof, sloppy watering by the weekend staff.

photo: F. McGavigan

Crozier of *Cibotium glaucum* at RBGE

This meticulousness was nowhere more evident than behind the scenes in the propagation and growing-on areas. Here Andy explained his spore sowing techniques – two doses of

boiling water to guarantee sterilisation of the compost, spores sown very thinly to prevent overcrowding, the pot sealed in a polythene bag or cling film, a constant temperature of 22°C with a 12 hour light (under fluorescent tubes) and 12 hour dark regime. Then, once the plants have developed sufficiently and acclimatised to the lower temperatures of the growing-on houses, they are fertilised, not occasionally as we might do, but every week. They are also potted-on in very free-draining compost consisting mostly of coarsely crushed bark to prevent overwatering. The result is too many ferns for the RBGE to cope with – but this meant that we benefited from some gifts of rarities before we left. A most satisfying day.

Argyllshire – 4 June **Frank McGavigan**

(*Participants*: Adrian & Janet Dyer, Andy Ensoll, Grant Fortune, Tim Godfrey, Amory Jewett, Pieter Kastelein, Frank Katzer, Frank & Linda McGavigan, Heather McHaffie, Mike Taylor, Alastair & Jackie Wardlaw, Maurice Wilkins.)

In Scotland, Argyllshire is famous for its rain and midges and we certainly had plenty of both – umbrellas were up, anoraks leaked, and the tall figure of the BPS President swathed in a midge net was a sight to behold. But the ferns were good, for the soft humid climate makes for ideal growing conditions.

We spent the morning at Benmore Botanic Garden (26/144855), a subsidiary of RBGE. The previous year Andy Ensoll had planted several exotics that he had grown from spores at Edinburgh and he rushed around inspecting the results of his handiwork. Despite his protestations that not enough time or effort had been put into the soil preparation, most were thriving: *Blechnum novae-zelandiae*, *B. procerum*, *Paesia scaberula*, all endemic to New Zealand, *Blechnum fluviatile* and *Histiopteris incisa*, native to a wider area of the Southern Hemisphere, *Blechnum chilense* from Chile, *Lophosoria quadripinnata* from Central and South America, *Coniogramme intermedia* from eastern Asia, *Dryopteris azorica* and various *Dryopteris* hybrids brought back from the Azores as spores by Mary Gibby, *Dryopteris* x *fraser-jenkinsii* from the Iberian peninsula, and many more. Those that had failed to take had probably died of drought, the soil being so thin and porous that a few days without rain, unusual though it is, can be disastrous for newly planted specimens.

Amory Jewett, on secondment to the garden from America, had gained permission for us to visit the old Victorian fernery, now in ruins and no longer containing any fern gems, but there are plans for its restoration, and as the Kibble Palace fernery at Glasgow Botanic Garden is currently being completely rebuilt, this may not just be wishful thinking. The Benmore fernery is situated in a wilder part of the garden with native ferns in abundance: *Dryopteris affinis*, *D. aemula*, *Athyrium filix-femina*, *Oreopteris limbosperma*, *Phegopteris connectilis* and *Blechnum spicant*, to name the most obvious.

The rainfall eased for our afternoon visit to Puck's Glen (car park at 26/147839). This is a magnificent but easily accessible ravine that no fern lover should miss. Despite 'improvements' of an earlier era most of the ferns are clearly naturalised. I have never seen in Britain such luxuriant 'filmies', both *Hymenophyllum tunbrigense* and *H. wilsonii* revelling in the moisture-laden atmosphere. Andy and Heather found yet another *Trichomanes speciosum* gametophyte site. There were epiphytic *Polypodium vulgare*, *Dryopteris dilatata* and, unusually, *Athyrium filix-femina*, all on one tree. *Polystichum aculeatum*, *Asplenium scolopendrium* and *A. trichomanes* were present not just where the hand of man had introduced lime mortar but in the cliff-faces where clearly there must be some basic seepage. Earlier, Frank Katzer had pointed out *A. adiantum-nigrum*, and of course there were the usual acid-loving ferns: *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris filix-mas*, *D. affinis*, *D. aemula*, *D. dilatata*, *Oreopteris limbosperma* and *Pteridium aquilinum*. When we added beech fern and oak fern the tally was seventeen sporophyte species, not bad for a gentle afternoon's stroll. Puck's Glen is a magical place, appropriately named.

We finished the day emptying our wallets at The Tree Shop at the head of Loch Fyne, which stocks a small but interesting selection of ferns as well as trees, and also much needed tea and coffee.

photo: F. McGavigan

Puck's Glen, Argyllshire

Back: Maurice Wilkins, Alastair Wardlaw, Mike Taylor, Janet Dyer, Tim Godfrey, Adrian Dyer, Amory Jewett (*half hidden*), Andy Ensoll
Front: Heather McHaffie, Linda McGavigan, Jackie Wardlaw, Pieter Kastelein, Grant Fortune, Frank Katzer

Ben Lui, Ciochan Crags, Perthshire/Argyllshire (27/262274) – 9 July

Frank McGavigan

(*Participants*: Mary Clarkson, Roger Holme, Frank Katzer, Andy MacGregor, Frank McGavigan, Heather McHaffie, Douglas McKean, Jackie Muscott, Mike Taylor.)

Ben Lui (or Beinn Laoigh) forms the western end of the Breadalbane Mountains, which stretch across central Scotland from the better known Ben Lawers in the east. This range, with its preponderance of calcareous mica-schist, is rich in botanical interest, so much so that we were continually distracted from our task for the day – the monitoring of the known *Woodsia alpina* sites on Ben Lui for Scottish Natural Heritage, who manage the area as a nature reserve.

SNH had given us a photocopy of the 1:10,000 map with the *Woodsia* sites marked and also six-figure grid references. Our job was to re-find the sites, take digital photographs, get ten-figure GPS references, count the plants and the number of fronds, measure their size, record how many were sporing, and generally assess their condition. We had agreed to do the same for *Cystopteris montana*, which, though not as rare as *W. alpina*, is listed in the Red Data Book (and is in any case Britain's most beautiful fern and thus worthy of special protection).

It seemed a straightforward enough task but turned out to be much more difficult than we had anticipated. The Ciochan Crags and the associated Stob Garbh, where the *Woodsia* grows, stretch for almost three kilometres around the north of the mountain and are made up of several parallel rows of cliffs stepped up the hillside – a huge area to search. As for the map, well, it is always difficult to pinpoint exactly where you are and close to the cliff face our GPS receivers were not giving very accurate readings. Furthermore, as anyone who has seen it in the wild knows, *W. alpina* is a tiny plant that likes to grow in crevices in the rock and is consequently hard to spot, while *C. montana* favours wet, steep gulleys out of reach

of sheep, and man. And then there were all those other plants to look at. Jackie Muscott, a Vice-County Recorder, amazingly listed 102 flowering plants, including the rare alpine bartsia (plus 19 pteridophytes), in her record of the day.

We did eventually find one of the known *Woodsia* sites and *C. montana* in several places. We also spotted *Botrychium lunaria* on a cliff ledge. I say 'we' but it was as usual Frank Katzer who was the first to find all of these. Also enjoying the calcareous conditions were *Asplenium viride* and *Polystichum lonchitis*. Tucked in among the rocks were *Cystopteris fragilis*, *Gymnocarpium dryopteris*, *Phegopteris connectilis* and *Dryopteris oreades*. As with all the Scottish hills, there are also large swathes of acidic terrain where *Athyrium filix-femina*, *Blechnum spicant*, *Oreopteris limbosperma*, *Dryopteris affinis*, *D. dilatata*, and *D. expansa* were noted. We added *Huperzia selago* and *Selaginella selaginoides*, *Equisetum sylvaticum*, and somewhere along the way *Polypodium* sp. (Surprisingly, we did not see *Cryptogramma crispa*, which grows in abundance higher up Ben Lui. Presumably, being a calcifuge, it does not like the mica-schist scree of the Ciochan Crags.)

So, although we only partially succeeded in our objective of monitoring the *Woodsia* sites, we had an excellent day. For once the weather was kind to us so that we were able to linger and enjoy the plants – both ferns and flowers – so much so, in fact, that we agreed to come back the following month and finish our allotted task.

Loch Libo, Renfrewshire (26/435557) – 23 July **Frank McGavigan**

(*Participants*: Stephen Bungard, Adrian Dyer, Andy Ensoll, Frank Katzer, Frank McGavigan, Heather McHaffie, Douglas McKean, Alastair Wardlaw.)

Dryopteris cristata has been recorded from Loch Libo in the past – long in the past – with searches in more recent years resulting in disappointment or dubious sightings. The Scottish group were determined to settle the argument one way or another, but I have to report that we found no trace despite some extensive searching, and are now convinced that it is no longer present, though of course that is impossible to prove with 100% certainty.

Suitably kitted out in wellingtons and waders we plunged into, not the water, but the dense growth that surrounds the Loch's edge and soon disappeared among the reeds and sedges (*Phalaris arundinacea*, *Phragmites australis* and *Carex paniculata*, amongst others) mixed with, notably, valerian, cowbane, meadowsweet, and in places common sallow. We were here to hunt for a two-foot-high fern among seven or eight-foot-high vegetation. This was not going to be an easy task and was made more difficult as we soon lost sight of each other, so that a systematic combing of the whole terrain may not have been achieved.

However, we did find pteridophytes. *Dryopteris dilatata* was everywhere, growing from the grassy tussocks. *Athyrium filix-femina* was also present, possibly on slightly drier ground. There were some beautiful examples of *Equisetum sylvaticum* reaching a height of easily three feet or more among the reeds. But these are tough plants used to coping with competition. Other species that we would expect to find were not present, perhaps being more sensitive to environmental factors. We did not see the *Dryopteris carthusiana* that a couple of us had noted at this site a year earlier, nor was there any sign of *Oreopteris limbosperma* even though this was one of the ferns that Adrian Dyer had cultivated from spores in a Loch Libo soil sample taken in the early 1990s. If these two cannot survive what chance *Dryopteris cristata*?

Since 1973, Loch Libo has been a nature reserve owned by the Scottish Wildlife Trust. As a result, grazing on the site, which might have kept a check on the worst of the competition, has ceased. Early maps show a different shape to the Loch, which probably means that the water levels have also altered. (Drainage seems to have been a factor in *D. cristata*'s demise elsewhere.) Have the fertility and pH changed with increased run-off of nitrogen and lime from nearby cultivated fields? All the lush growth would suggest a base-rich terrain, but *D. cristata*

prefers acid fens. And for a fern that favours more of a continental climate, what was it doing in the west of Scotland in the first place? There are still a lot of unanswered questions that will require some further research to resolve. That should keep us busy over the winter months.

Ben Lui, Ciochan Crags (27/262274) and Stob Garbh (27/272271), Perthshire/ Argyllshire – 13 August

Frank McGavigan

(*Participants*: Frank Katzer, Frank McGavigan, David Pickett.)

In the event only two of us could make it for the return visit, but we were joined by David Pickett who is the SNH Manager of the Ben Lui Nature Reserve. Was it his presence, the smaller group, the absence of botanists, or just the rain that spurred us on to move faster than on our first visit and consequently get more done? This time we found three more *Woodsia alpina* sites (and revisited the one we had been to last time), located lots of *Cystopteris montana*, and added two more ferns (*Asplenium trichomanes* and *A. ruta-muraria*) and two clubmosses (*Diphasiastrum alpinum* and *Lycopodium clavatum*) to our list. I can lay claim to finding one of the *C. montana* sites (not too difficult as this 'rare' fern is here comparatively plentiful) but as always it was Frank Katzer who located the *W. alpina*. He claims that first you need to identify the kind of rock it likes (deeply fissured cliff faces where it can tuck itself under a protective overhang while still enjoying the free drainage that it needs). Then it is just a matter of scanning the rock face for *Woodsia* fronds. All I can say is that he must have considerably better eyesight than most of us, for the plants are often growing in inaccessible places, too risky to reach for a closer look.

Indeed this whole area is not for the faint-hearted and is downright dangerous in wet and windy weather. The cliff faces are steep, with a lot of loose rock, which is in a continuous process of breaking away from the crags, sometimes in enormous pieces. It was on one of these boulders, which had fallen several years previously and come to rest considerably further down the hillside, that we found our last *Woodsia* site. In fact we had been told previously by John Mitchell, who had conducted a *Woodsia* survey in Scotland, that he had recorded this site but we were please to find it for ourselves. Also on this boulder were *Asplenium viride*, *A. ruta-muraria* and *Cystopteris fragilis* – a little fern paradise.

Later, back at the car, while we poured the water from our boots, we contemplated what a successful trip it had been. We had located four *Woodsia* sites, we had counted the number of fronds, taken GPS readings, photographed the locations, and contributed to Scotland's leading conservation body's programme for preserving this rare fern. Only later did David discover that only two of these sites were the 'official' SNH locations marked on his map. So there are two more yet to be rediscovered. Another trip anyone?

Arran, Firth of Clyde – 24-25 September

Frank McGavigan

(*Participants*: Liz Doig, Roland Ennos, Mary Gibby, Tim Godfrey, Yvonne Golding, Angus Hannah, Frank Katzer, John & Margaret Lyth, Frank McGavigan, Christine Nicholson, Martin Rickard, Tony Smith, Ken Trewren, Alastair Wardlaw.)

Arran is the largest of the Clyde Isles and is of such varied topography that it is often called 'Scotland in miniature'. Its flora, including the fern flora, is equally diverse and has been meticulously recorded by Tony Church and Tony Smith: *The Arran Flora*, 2005 edition, published by the Arran Natural History Society. However, with only two days at our disposal we inevitably had to be selective about sites and we confined ourselves in the main to the raised beach that forms the coastal strip on the east side of the island.

On Saturday morning we set off from Lochranza (16/938502) for the **Cock of Arran** in the north. However, we never actually reached our destination as there were so many ferns to find, particularly on the old sea cliffs, that we ran out of time. As well as the ubiquitous bracken and

other calcifuges such as *Blechnum spicant*, *Athyrium filix-femina*, *Dryopteris dilatata*, *D. filix-mas* and *Oreopteris limbosperma*, there were also, due to the mixed geology of Arran, ferns that prefer more basic conditions – *Asplenium adiantum-nigrum*, *A. scolopendrium*, *A. trichomanes* subsp. *quadrivalens*, *Phegopteris connectilis*, *Polypodium vulgare*, and *Polystichum setiferum*, which seemed so out of place among the rocks of the raised beach that I am ashamed to admit I did not recognise it. More interestingly we found *Dryopteris aemula* with its distinctly crisped fronds and both filmies (*Hymenophyllum tunbrigense* and *H. wilsonii*) and of course Mary and others soon found *Trichomanes speciosum* gametophytes. The sporophyte is also present on Arran at four isolated sites but understandably their whereabouts are kept secret, even from such distinguished pteridologists as ourselves.

So far I have not mentioned *Dryopteris affinis*. Arran has all three subspecies and numerous hybrids and variants, and with Ken Trewren as one of our party we were not going to get away with recording the species alone. So as well as *D. affinis* subspp. *affinis* and *borreri*, we had subsp. *cambrensis* var. *paleaceocrispa* (the normal *cambrensis* according to Ken), and (later confirmed by Ken) subsp. *cambrensis* var. *pseudocomplexa* (otherwise known as morphotype *arranensis* of Pigott).

Further evidence of the complexity of the *Dryopteris affinis* agg. on Arran was found in **Cordon Wood** (26/035296) in the afternoon. Here, led by the indefatigable Tony Smith up and down the steep slopes of this seemingly impenetrable woodland, we added *D. affinis* subsp. *affinis* var. *paleaceolobata* and *D.* x *complexa* nothosubsp. *complexa* (along with its parents) as well as the *D. affinis* subspecies and variants we had seen in the morning. By this time not a few of us were becoming confused, and please, if you wish further elucidation, consult Ken, not me.

Cordon Wood also revealed some more easily recognisable ferns such as *Dryopteris aemula* again, and of course *D. dilatata*, *Athyrium filix-femina*, *Blechnum spicant*, *Oreopteris limbosperma* and *Pteridium aquilinum*. We also noted *Asplenium trichomanes* subsp. *quadrivalens*, *Hymenophyllum tunbrigense*, *Phegopteris connectilis* and *Polypodium interjectum*, while Martin and Mary found some fine examples of *Polystichum aculeatum* that the rest of us inexplicably missed. Ken, who had sensibly brought a torch, searched for and found the *Trichomanes* gametophyte again. Cordon Wood was the only place, surprisingly, where we recorded horsetails, though they surely must be abundant on Arran. Here we saw *Equisetum arvense* and *E. sylvaticum*.

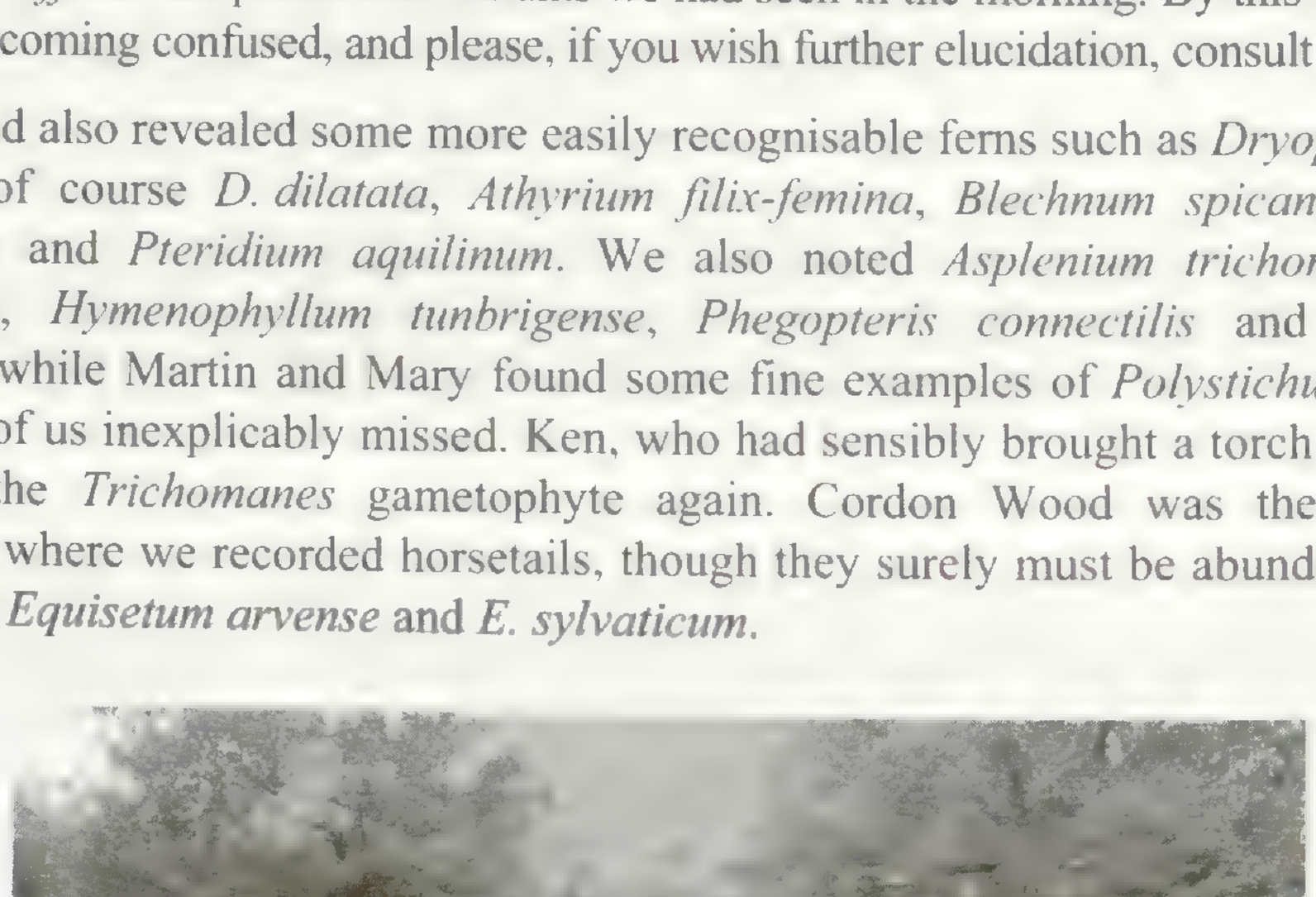

photo: F. McGavigan

Glen Sannox, Arran

Tony Smith, Martin Rickard, Mary Gibby, Christine Nicholson, Ken Trewren, Frank Katzer, Alastair Wardlaw, Roland Ennos, Liz Doig, Angus Hannah

On Sunday morning Tony Smith took us along the coast at **Sannox** (26/017454) between the Sannox Burn and the North Sannox Burn, at one point leading us through what seemed acres of bracken – Arran must have more bracken per square mile than anywhere else in Britain. However, down below the old sea cliff there was much greater variety. Here *Asplenium ruta-muraria* was growing in the rock along with *A. trichomanes* subsp. *quadrivalens*, *Polypodium vulgare* and *P. interjectum* (at first we thought we had the hybrid *P.* x *mantoniae* but further examination showed the spores to be viable). Nearby there was *Cystopteris fragilis* (surprisingly not very common on Arran apparently) and on wet rocks both filmies were growing, while a little bit of hunting revealed the *Trichomanes* gametophyte again.

Along the way, as you would expect, were *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris aemula*, *D. affinis* subspp. *affinis*, *borreri* and *cambrensis* var. *paleaceocrispa* (by now these names were beginning to trip off the tongue), *D. dilatata*, *Oreopteris limbosperma*, *Phegopteris connectilis*, and *Polystichum aculeatum*. Oh, and did I mention *Pteridium aquilinum*? We did not spot the *Dryopteris expansa* that Ken and Martin found here when they returned the following day.

However, we had been promised *D. expansa* at **Merkland Wood** (26/022386), which we duly found though not particularly spectacular examples. Also here was probable *D.* x *ambroseae*, though that would need confirmation; certainly *D. dilatata* was present, so with both parents around it seems likely. We noted the remnants of what had once been a huge colony of *Hymenophyllum tunbrigense*, much of which had been inadvertently destroyed by the clearance of the protective understorey of rhododendron, and a cry of excitement went up when *Osmunda regalis* was discovered, but apparently it had been planted by the foresters. Genuinely wild *Osmunda* had been found by Yvonne, Roland and Frank Katzer at **King's Cave** (16/884309) on the west side of the island along with *Asplenium marinum* and other more common things. Further north at **Catacol** (16/910497) Frank Katzer had discovered *Asplenium ceterach* growing in an old wall, a new record for Arran.

Sunday afternoon was to be taken up touring the fine collection of cultivated ferns at **Brodick Castle Garden** (26/015380) but before reaching them Tony Smith pointed out colonies of *Asplenium scolopendrium* and *Polystichum aculeatum* just over the entrance wall. Some of the latter turned out on closer inspection to be *P.* x *bicknellii*, although the other parent, *P. setiferum*, was not in the immediate vicinity.

The fern collection at Brodick has been a little neglected of late but it still remains relatively intact and Christine, who now works there, is keen to restore it to its former glory. Martin was able to name some plants whose labels had been lost and correct the names of others. though not what was marked as 'Fern No 2 (NW Yunnan)'. The benign climate favours tree-ferns, and *Cyathea dealbata* and *Dicksonia squarrosa* were flourishing while *D. antarctica* was multiplying everywhere. There were some fine specimens of *Lophosoria quadripinnata*, but *Cyathea brownii* remained protected in a greenhouse, where there were also several *Thyrsopteris elegans* awaiting outside trials. *Osmunda* was represented by *O. claytoniana* and *O. japonica*, and *Woodwardia* by *W. fimbriata* and *W. radicans*. *Pteris cretica*, *Dryopteris clintoniana*, *D. cycadina*, *D. carthusiana* (the North American variant), *Microsorum pustulatum* (syn. *M. diversifolium*), *Polypodium glycyrrhiza*, *P.* x *mantoniae* 'Cornubiense', *Polystichum polyblepharum*, *P. proliferum*, *Blechnum penna-marina* – the list goes on, some common, some rare, all interesting.

Perhaps most interesting of all, were the several plants of *Athyrium filix-femina* 'Victoriae' because Brodick Castle used to be owned by the proprietors of Buchanan Castle, where the original clone was found, and there can be no doubt that Brodick's are the real thing. So from the confusion of the *Dryopteris affinis* agg. to the freak that is *A. filix-femina* 'Victoriae' this proved to be an excellent weekend, much enjoyed by all.

Group of European Pteridologists (GEP) Excursion

Brittany, France – 19-23 August **Pat Acock**

This year's excursion to Brittany was based in Finistère and was hosted by our good friends Rémy and Annie Prelli. It was 15 years since the BPS had its first excursion to this part of the world, one of our first international trips that led to the formation of the GEP. We met on Friday night for dinner and were introduced to many new friends.

Next day we explored around Le Cap Sizun, visiting firstly the Pointe du Raz to see a splendid cave on the sea cliffs with the walls and floor covered in *Trichomanes speciosum* gametophytes. On the Pointe de Penharn we found beautiful colonies of *Asplenium marinum* and *A. obovatum* subsp. *obovatum* and this was followed by a group of *A. obovatum* subsp. *lanceolatum* among a Neolithic set of standing stones. After being sufficiently refreshed with tea and the local pastries in Chateaulin we wandered around the town to see a large collection of ferns, most notably *Polypodium cambricum* and *Asplenium obovatum* x *A. adiantum-nigrum*.

On Sunday we parked in the church of Saint Herbot but to the priest's disappointment we descended to the 'Chaos' of rocks, where, after much searching by many people, we eventually found a small colony of *Hymenophyllum wilsonii*. There was a considerable amount of *H. tunbrigense* and we also saw *Oreopteris limbosperma* and *Dryopteris aemula*. After lunch we visited Roc'h Trédudon to see both *Lycopodiella inundata* and *Lycopodium clavatum*. On to Ménez Kador and we added *Osmunda regalis* in this boggy countryside. The day ended with our host buying a round of drinks in Pleyben.

On Monday our first destination was the Conservatoire Botanique National de Brest. We were taken around the glasshouse area where rare plants from many isolated islands from around the world are conserved. One plant has already been used to recolonise an island after having become extinct there. The collection housed a large number of ferns including *Polystichum drepanum* from Madeira. Following this we had a lecture from Sandrine Loriot on *Trichomanes speciosum*.

We left to move on to the beautiful Forêt du Cranou. Here in shady forest rides we found some magnificent *Dryopteris aemula* and *D. affinis* subspp. *affinis* and *borreri*. In a second wood at Bois du Nivot we added *Polypodium interjectum* and *P. vulgare*.

On Tuesday we visited the Crozon Peninsular with its breathtaking rocky capes. Most notable was the Cap de la Chèvre, where most managed the steep climb down to be rewarded by *Osmunda regalis, Adiantum capillus-veneris* and *Asplenium obovatum* subsp. *lanceolatum*. Later, while examining a charming lane that could have been in Cornwall for *Asplenium obovatum* subsp. *lanceolatum, A. adiantum-nigrum* and *A. onopteris*, Paul Ripley and I strayed a little further and found a well. While looking for hybrids of the afore-mentioned spleenworts, I leaned too far forward and my GPS fell ten feet down the well into eight feet of water, causing much amusement to the villagers. From here we went to look at *Polypodium cambricum* in the charming village of Landévennec, where we rounded off the tour with drinks outside in the sunshine.

We must pay tribute to both Annie and Rémy Prelli for a most excellent meeting in this beautiful part of France. The programme was very carefully arranged to show the maximum number of ferns in the confines of Finistère with the minimum of travel and the maximum of time to talk to each other and enjoy the places together.

In 2006 we hope to go to Madeira. If you are interested in joining the GEP annual excursion please contact Prof. Ronnie Viane, Dept. of Morphology, Systematics and Ecology. Section: Pteridology, K.L. Ledeganckstraat 35, Gent, B-9000 Belgium. E-mail: Ronnie.viane@rug.ac.be; Tel. & Fax: +329-2645057.

HORTICULTURAL SHOWS

SOUTHPORT FLOWER SHOW – 18-21 August — M. Hayward

The BPS stand had a fresh look this year. A newly acquired folding display board formed the backdrop to the stand, the centre panel displaying information about the Society and the side panels showing laminated A4 photographs of ferns, ferny locations and members on field trips. The theme for this year's show, 'Travel Worldwide', gave us an opportunity to show our most inviting pictures from sites around the world, including New Zealand, Trinidad, Azores, Canary Islands and Britain. In the foreground we had a display of spore sowing and young ferns at various stages of growth, which, as always, provoked much interest. A leaflet on spore sowing, together with a sample packet of spores, proved too interesting and had to be reprinted twice during the show! A small Wardian case filled with ferns, displayed by Ann Gill, also proved to be a useful talking point.

The stand was busy with visitors on all four days of the show, aided by the fine weather. There was a steady sale of merchandise, chiefly cards. The new FSC Key to Common Ferns waterproof fern identification guide was a hit with the visitors, our supply selling out on the first day. One of the commonest questions asked was how to care for tree-ferns purchased, without advice, from a local nursery. There were a number of enquiries about membership.

The number of exhibitors in the competitive classes remains small and we would like to encourage more local members to participate. Showing a wide variety of interesting ferns is an excellent way of stimulating public interest in fern culture. The prize-winners are listed below.

Class 6 Individual Championship: Four Hardy British Ferns (dissimilar), two Greenhouse Ferns (dissimilar) and two Foreign Ferns Hardy in Great Britain: 1st B. Russ, 2nd M. Hayward, 3rd O. Fairclough (3 entries)

Class 7 Three Hardy British Ferns (distinct species, not varieties): 1st M. Hayward (3 entries)

Class 8 One Foreign Fern Hardy in Great Britain: 2nd O. Fairclough (1 entry)

Class 9 Three *Polypodium* (3 distinct varieties): (no entries)

Class 10 Three *Polystichum* (3 distinct varieties): 1st M. Hayward (1 entry)

Class 11 Three *Athyrium* (3 distinct varieties): 1st M. Hayward (1 entry)

Class 12 Three *Asplenium* excluding *A. scolopendrium* (3 distinct varieties or species): 1st M. Hayward (1 entry)

Class 13 One British Fern (any genus or variety): 1st M. Hayward, 2nd O. Fairclough, 3rd P. Fischer (3 entries)

Class 14 One Greenhouse Fern: 1st D. Abbott (1 entry)

Class 15 Three *Asplenium scolopendrium* (3 distinct varieties): 2nd B. Russ (1 entry)

The BPS cup for the Individual Championship was won once again by member Brian Russ. The Happiland Trophy for the most wins in all other classes went to Michael Hayward. The judge was Richard Key.

I would like to thank Ann Gill, Rita Hardman, Joan Hindle and Trevor Piearce for their hard work and smiling faces, which attracted so many visitors to the stand this year. After the show we again had a social evening at my house in Blundellsands, and I hope that this will be an annual event for as long as I have ferns in my garden.

The dates for next year's show are 17-20 August 2006 and the theme will be 'Water', the start of a series of themes on 'The elements'. We would encourage members within travelling distance to come and see what surprises we have on display. Or why not join us on the stand and get your entrance to the show free! If you are interested in showing ferns, either contact M. Hayward, 6 Far Moss Road, Liverpool L23 8TQ; mhaywardL23@blueyonder.co.uk, or obtain details of the schedule direct from the organisers at www.southportflowershow.co.uk.

SECRETARIAL NOTES

Please note: *names and contact details of all officers can be found on the inside of the front cover of this* Bulletin.

ANNUAL GENERAL MEETING 2006 – The 103rd AGM will take place on Saturday 25th March 2006 at Cambridge University Botanic Garden, 47 Bateman Street, at 14.00 hrs.

COMMITTEE VACANCIES – In accordance with paragraph 3, section 3 of the Society's Constitution, five vacancies will occur on the Committee. Nominations are invited from Society members to fill these vacancies at the Annual General Meeting in 2006. The names of the nominees, proposers and seconders, together with a letter from the nominee indicating his or her willingness to serve, should reach the General Secretary before the AGM. Members with a potential interest in serving as an elected Committee member and who wish to know more of the duties and responsibilities are invited to contact the Secretary.

SUBSCRIPTIONS 2006 – Members are reminded that subscriptions were due on 1st January 2006 and should be paid to the Membership Secretary. Cheques should be made payable to 'The British Pteridological Society'. Current rates are given inside the front cover of this issue. Payment can be made by **Credit Card** – see renewal form. **Standing Order** forms are printed on the reverse of renewal forms and are also available from the Membership Secretary and the BPS website (www.eBPS.org.uk). Standing Orders may be paid on 1st January or 1st February. In either case, membership is deemed to be from 1st January to 31st December.

Members are reminded that according to Clause 11 of the Constitution "Any member failing to pay his subscription within six calendar months of its becoming due shall be liable to have his name removed from the List of Members of this Society"! Defaulting members who do not amend their Standing Orders with their bank and are still paying at the old rate shall be notified that they will not receive the Fern Gazette until such time as their Standing Orders are updated. Members still paying even earlier rates shall be notified that their name will be removed from the Membership List until such times as Standing Orders are updated or cancelled. Any monies received from old Standing Orders will be treated as a donation.

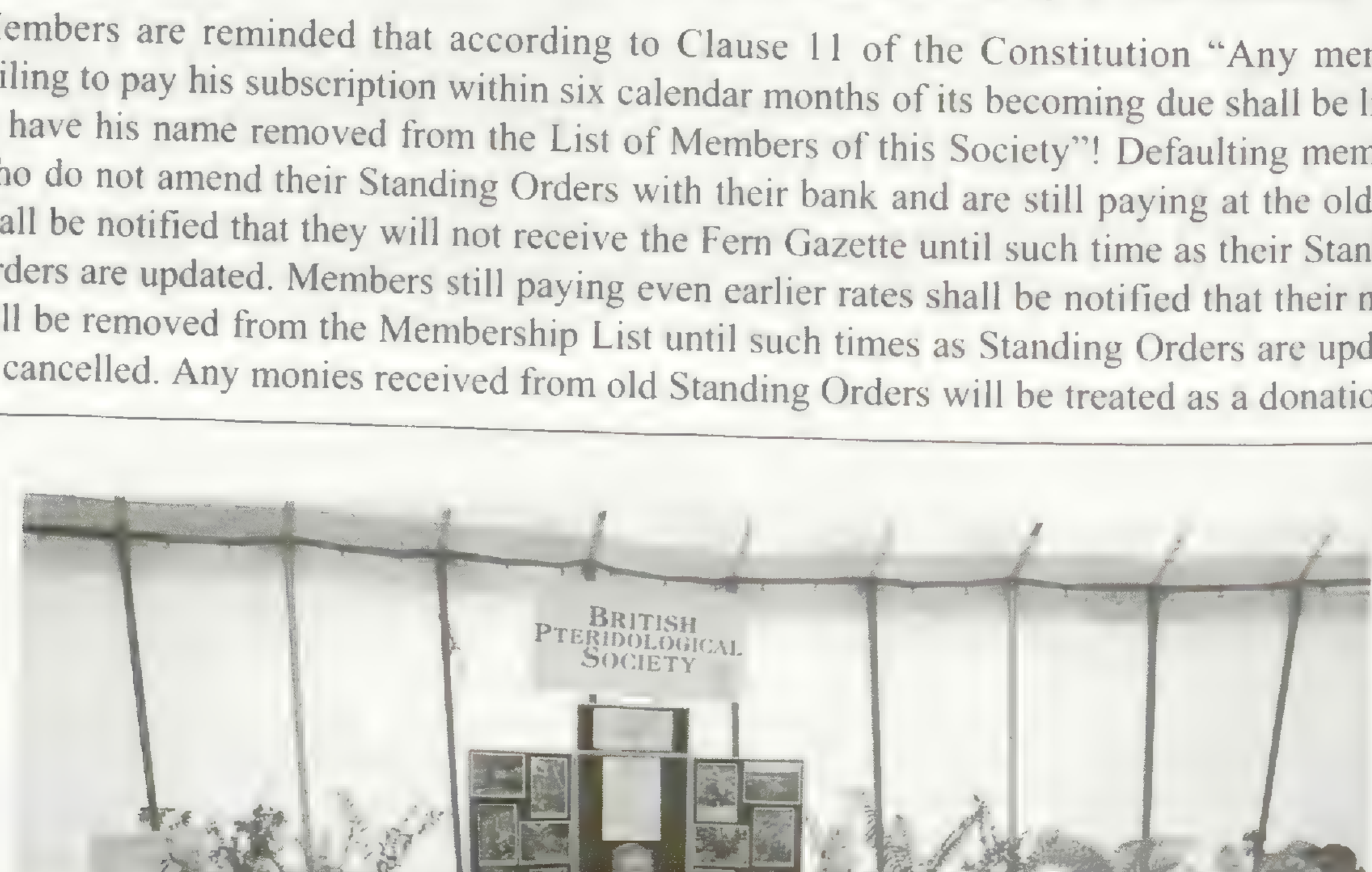

photo: M. Hayward

Southport Flower Show 2005

Ann Gill, Trevor Piearce, Joan Hindle, Rita Hardman

GIFT AID – Since 2003 the BPS has been a registered charity. This enables us to claim back from the Inland Revenue 28p for every pound paid in the annual subscription for each member who authorises us to do so. Since 2003, increasing numbers of members have authorised us to claim Gift Aid on their behalf, and last year (2005) we were able to claim for 207 members, which brought in £1,129. While this is obviously an extremely valuable addition to the Society's annual income, it could be considerably more. There are probably a further 200 members on whose subscriptions the Society could claim Gift Aid if these members authorised it and this could lead to perhaps another £1,000 per annum. All that is required is a minimal amount of form filling (about one minute) and a second class stamp. **Even better, the form has only to be filled in once.** The forms are retained by the Gift Aid Secretary and the same ones used year after year to make the claim.

The small number of provisos are set out below:

1. Gift Aid is available only to members who reside in the UK.
2. Members on whose subscription Gift Aid is claimed must be paying income tax or capital gains tax at least equal to the amount claimed.
3. Members whose subscriptions are allowed as an expense in connection with their employment may not claim Gift Aid.

If the Inland Revenue allows us to claim relief on your membership subscription please authorise us to do so. It's the equivalent of a yearly £5 donation to the Society.

DIRECT DEBIT – The Society does not offer a Direct Debit facility for subscriptions. The reasons are two-fold. Expensive software is required to create a direct debit tape to send to the bank and is too expensive for a small Society like the BPS. With Standing Orders the bank does all the administration, whereas with Direct Debits a considerable additional workload would fall on the Society, in particular the Treasurer, and it is necessary to bear in mind that all officers offer their time and services on a voluntary basis.

NOTIFYING CHANGES OF ADDRESS – Please inform the Membership Secretary of changes of address and telephone number. He will be responsible for notifying any other officers and appointees who need to know.

E-MAIL ADDRESSES – These were published last year, as agreed, "for members who have a relatively stable e-mail address and who keep up-to-date with their messages". A supplementary list and amendments are published in this *Bulletin*. Members who wish to have their e-mail address added, changed or removed are requested to inform the Membership Secretary BY E-MAIL at: Membership@eBPS.org.uk.

PUBLICATIONS BY AIRMAIL – Our journals can be sent by airmail to overseas members, provided that they advise the Membership Secretary and pay an additional subscription to cover airmail postage. See inside front cover for rates.

CODES OF SAFETY, CONDUCT AND DECLARATION FORM – All members attending Society field meetings should be aware of the Society's *Safety Code* (see 2000 *Bulletin* 5(5): 275), as well as the *Code of Conduct for the Conservation and Enjoyment of Wild Plants* (see 1999 *Bulletin* 5(4): 199), and are required to sign a Declaration form. Copies of these documents can be obtained from the Meetings Secretary or BPS website.

GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would have wanted this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Applications will normally be dealt with once a year and should be submitted by 1st

November. Anyone wishing to avail themselves of this fund should contact the Hon. General Secretary for further information.

CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Applications will normally be dealt with once a year and should be submitted by 1st November. Anyone wishing to avail themselves of this fund should contact the Hon. General Secretary for further information.

TREE-FERN SPECIAL INTEREST GROUP – For further information, please either send a stamped addressed envelope to the organiser, Prof. A.C. Wardlaw, 92 Drymen Road, Bearsden, Glasgow G61 2SY, or contact him by e-mail: Tree-Ferns@eBPS.org.uk.

MEMBERS' INFORMATION SERVICE – Members often require information and advice on many aspects of pteridophytes but are reluctant to ask or simply do not know where to obtain help. Queries from members on any aspects of the biology, identification or cultivation of ferns or fern allies should be sent, with three first class stamps, to the Horticultural Information Officer.

READING CIRCLE – The Society operates a reading circle for the *American Fern Journal*, a quarterly publication containing much information for those seriously interested in ferns. The *Fiddlehead Forum*, which publishes many 'ferny' items of interest to the amateur grower, accompanies it. To receive these journals contact the Horticultural Information Officer.

FOREIGN FERN SOCIETY JOURNALS HELD BY THE SOCIETY – The Society exchanges journals with a number of other fern societies in the world. We have a collection of journals/newsletters from societies in the United States (2), Australia (3), New Zealand, India and the Netherlands. If members would like to browse these, they are welcome to get in touch with the Back Numbers Organiser for a list of our holdings. The journals can then be borrowed for just the cost of postage both ways.

BACK NUMBERS OF JOURNALS – Our Back Numbers are always a good source of Pteridological information. They contain articles written by an array of authors on interesting fern subjects. You can have a sample pack of six journals for £6. A full list of journal parts stocked is available from Pat Acock.

BPS WEBSITE – www.eBPS.org.uk (Hosted by The Natural History Museum.) In today's internet-oriented world, it is increasingly important for the Society to see the website as a major means of communication. The website provides information for the membership, but it is also, and perhaps more importantly, a 'shop-window' to present the Society and pteridology to the wider world. Our aim is to make our website the premier source on the Internet of information about pteridophytes and pteridology. We have recently formed an Advisory Group to support the Website Editor. This group will help to clarify the objectives for our website and to support the work necessary to achieve those objectives. Members with views on what the website should provide and with offers to help with content should contact the Website Editor, Anthony Pigott.

BPS E-MAIL LIST – Members are reminded that there is an e-mail group or 'list' for BPS members only. Its purpose is for discussion of Society matters of common interest and for communication of information; it is not intended as a list to discuss the botany or growing of ferns, for which another list such as FERNS would be more appropriate. See the BPS Website under 'Links'. Send a blank e-mail to: BPS-subscribe@yahoogroups.com to subscribe. Unless your real name is obvious from your e-mail address, please send an e-mail at the same time to Webmaster@eBPS.org.uk in order to identify yourself as a BPS member. Members are encouraged to join as the potential benefits are greater with a fuller participation. Contact the BPS Website Editor for further information.

BPS VIDEO 'BRITISH FERNS' – This twenty-five minute video shows most of the native British ferns growing in their natural habitats. It demonstrates the wide variety of size and form to be found in British ferns and the broad range of habitats they colonise. Attention is drawn to key identification characters for each species.

Schering Agriculture and the National Museum of Wales funded the video. It is available for loan to members and interested organisations for £3, to cover handling costs (UK only). For further details write to the General Secretary enclosing a stamped addressed envelope.

BRITISH WILDLIFE – Concessionary individual subscriptions to *British Wildlife* magazine are available to BPS members.

ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS, enabling a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services.

PAYMENT OF EXPENSES – Documents setting out the *Rules of Conduct for the Treasurer* (BPS/T/1), the *Rules for Seeking Re-imbursement of Personal Travelling and Administrative Expenses* by officers and members acting on behalf of the Society (BPS/T/2), and the *Authorities for Payment* (BPS/T/3) can be obtained from the Honorary Treasurer on request.

COPYRIGHT – All contributors to the BPS journals and website are required to sign an agreement assigning ownership of copyright of the article, photograph etc. to the BPS. This has the aim of safeguarding the contributors' work from unlawful copying and use. It does not stop contributors from using their own work elsewhere provided that they acknowledge the original source of publication.

MERCHANDISE – Do you have a BPS sweatshirt, polo shirt or fleece? These are all dark green with a small embroidered BPS logo in yellow. Other items, such as BPS ties, metal badges, ferny greetings cards, bookmarks, pens and mugs, are also for sale. Can't find your order form? Contact the Merchandise Organisers or look on the website for details. The Organisers also welcome suggestions for new stock.

THE FUTURE OF BOOKSALES – Last year, Steve Munyard regretfully advised the Committee of his need to relinquish his role as Booksales Organiser, and so far we have been unable to find a replacement. Would you be interested? There is the possibility of splitting management of BPS Special Publications from the sale of other new or second-hand books. Now that new and second-hand books on ferns are so readily available on the Internet, anyone interested in taking over this aspect of Booksales would not be expected to actively seek out books for sale, unless of course they had a burning desire to do so, but to be ready to accept or purchase suitable books offered to them for sale to members. Contact Steve to find out what is involved.

DESTINATION OF PTERIDOPHYTE RECORDS – Members are reminded that records of ferns and fern allies in the wild should be sent to the appropriate Botanical Society of the British Isles (BSBI) Vice-county recorders, whose addresses are available from the BSBI website or BSBI yearbook, which is available to BSBI members. For those without access to the Internet or yearbook, records may be sent to the BPS Recorder, Fred Rumsey, who will forward them to the BSBI. These records are stored centrally at the Biological Records Centre, and can be accessed by the BPS.

SOUTHPORT FLOWER SHOW – Why not spend a few hours or a day helping man the Society's stand? You do not need to be an expert on ferns or fern growing, just prepared to spend a few hours or a day with us. Expenses are available, as well as free entry to the Show. Details are available from Michael Hayward, 6 Far Moss Road, Blundellsands, Liverpool L23 8TQ, mhaywardL23@blueyonder.co.uk.

BPS FIRST MINUTE BOOK – This historical document containing the Committee Minutes from the inception of the Society in 1891 to 1983 is available in full colour on a CD ROM at £10 per copy, including postage. Place your order with Pat Acock.

NURSERY ADVERTISEMENTS – Members with nurseries that offer ferns are reminded that they may place an advertisement in the *Bulletin*, *Pteridologist* and on the website, free of charge, in return for the inclusion of a note about the Society in their catalogues. A suitable form of words is available from the Secretary. The Website Editor can add a suitable image of a plant or the nursery against the nursery's details, if it is wanted. The leaflet *Where to see ferns* is being revised. If members wish their nursery to be included, please contact the Hon. Gen. Secretary.

THE HARDY FERN FOUNDATION – The Hardy Fern Foundation was founded in 1989 to establish a comprehensive collection of the world's hardy ferns for display, testing, evaluation, public education and introduction to the gardening and horticultural community. Many rare and unusual species, hybrids and varieties are being propagated from spores and tested in selected environments for their different degrees of hardiness and ornamental garden value. Membership costs just $25 for regular members or $30 for family membership. Members receive a first-rate introductory pack, a quarterly journal and access to their spore exchange.

A reciprocal arrangement has been set up to make payment easier. Those wishing to join or renew their subscription for 2006 should contact Pat Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ as soon as possible after reading this notice and will be informed of the current membership rate in pounds. The contact in the USA is Michelle Bundy, 16038 46th Ave, South, Tukwila, WA 98188 USA.

AMERICAN FERN SOCIETY – The AFS has had a reciprocal payment arrangement with the BPS for many years through their respective Membership Secretaries. See AFS advert on p. 338.

QUALIFIED ARCHIVIST WANTED – During the past three years, the Society's considerable archive items have been gathered together and carefully sorted and catalogued by A.R. (Matt) Busby. It now remains for the individual items to be catalogued and any necessary preservation measures carried out before a depositary can accept them. The Committee is in the process of preparing an application to the Heritage Lottery Fund for a grant to carry out this final stage. The application needs details to be given of the work to be carried out and the Committee is seeking a qualified archivist to advise on the preservation and cataloguing required. If you are such an archivist or know of one who might be willing to give this service, then please contact Matt Busby or Jennifer Ide.

BPS ARCHIVIST WANTED – Matt Busby is retiring as the Society's Archivist at the AGM in 2007, and the Committee is seeking a replacement. If you are interested in the history of your Society and are fascinated by the people who founded it and those who have been responsible through the years for developing its activities and building the Society into one with an envied reputation worldwide, then please consider becoming the Society's Archivist, if possible working alongside Matt for the coming year before taking over responsibility. (Perhaps two people would like to work as joint archivists?) The depositary will care for the archive, but as Archivist, you will be responsible for receiving documentary items, making decisions about what should be retained and cataloguing them preparatory to their being deposited in the archive. As well as documents that will come your way from officers and others, or personal items left to the Society by members, you will be encouraged to be alert to other items for inclusion in the archive, such as photographs and articles significant to the history of the Society and the history of pteridology in the British Isles, and to encourage others members to contribute. If you would like to know more, then please contact Matt Busby, Adrian Dyer (President) or Jennifer Ide (via the General Secretary).

ANNUAL GENERAL MEETING 2005

MINUTES of the 102nd Annual General Meeting of the British Pteridological Society held on Saturday, 19th March 2005 at the University of Manchester's School of Biological Sciences Botanical Experimental Grounds, at 14.00 hrs.

IN THE CHAIR: The President, Dr A.F. Dyer.

PRESENT: Mr R.G. Ackers, Mr P.J. Acock, Mr G. Baldwin, Mr C. & Mrs D. Brotherton, Mr B.K. Byrne, Mr J.P. Crowe, Mrs P.M.A. Francis, Mr C.L. Godfrey, Dr Y.C. Golding, Mr C. Goodman, Mr J.D. Grue, Mrs F. Haigh, Dr M. Hayward, Prof. R.J. Hayward, Mrs J. Hindle, Mr R. Hood, Miss J.M. Ide, Ms E. Knox-Thomas, Mr M.P. Lamb, Mr B.J. Laney, Mr F. McGavigan, Mrs S.H. Medd, Mr M.L. Merritt, Dr J.W. Merryweather, Mr M. Morgan, Mrs J. Neal, Dr T.G. Piearce, Mr M.S. Porter, Miss A.M. Paul, Mr M.H. Rickard, Mr H.C. Shepherd, Mr B.D. Smith, Mrs G.J. Smith, Mr F.A. Strang, Mr R.W. Sykes, Prof. B.A. Thomas, Mr K. Trewren, Prof. A.C. Wardlaw, Miss L.A.M. Williams, Mrs A. & Mr B. Wright.

Item 1 – APOLOGIES FOR ABSENCE: Mr A.R. Busby, Mr R.J. Cooke, Mr C.P. Ellis, Mr C.R. Fraser-Jenkins, Mr P.B. Freshwater, Dr M. Gibby, Mr N.A. Hall, Mr A. Leonard, Dr H.S. McHaffie, Mr S.J. & Mrs K. Munyard, Miss R.J. Murphy, Mr P.H. Ripley.

Item 2 – APPROVAL OF MINUTES: Minutes of the 101st Annual General Meeting of the British Pteridological Society held on Saturday 20th March 2004, and published in the 2004 *Bulletin* (Vol. 6, No. 3) were approved (proposed by Prof. A.C. Wardlaw, seconded by Miss A.M. Paul) and signed by the Chairman.

Item 3 – MATTERS ARISING: None.

Item 4 – REPORT OF THE HONORARY GENERAL SECRETARY (J.M. Ide):

The Committee only met twice in 2004, the summer meeting being cancelled owing to the personal circumstances of the Secretary. This resulted in a mammoth meeting in October, when it was found necessary to prioritise items on the agenda, with a few items having to be postponed for more detailed discussion until the meeting in January 2005.

EXPENSES, COMMITTEE SIZE AND MEETINGS: An item that engaged the Committee for several hours of discussion during the year was the matter of travelling expenses for Committee members. It is usual for members to pay their own expenses, with provision being available for anyone needing financial help. (This is usual in societies such as the BPS that are run by volunteers. It enables subscriptions to be kept low, thus encouraging interested people to join.) Until now, the Society has been fortunate, with the majority of the Committee not requesting reimbursement and consequently no undue stress has been put on the Society's finances. However, the cost of attending London meetings is significant for some Committee members and without some financial assistance they would be unable to accept the invitation to join the Committee and make their time and skills available to the Society.

A small working party, under Prof. A.C. Wardlaw, was asked to review the 'if, what and how' members of the Committee could claim expenses for attending meetings, and the two other inextricably entwined issues: Committee size and the number of meetings a year. The working party was asked to make proposals to reduce the overall expenditure on Committee travel and accommodation.

The large size of the Committee (26 if everybody attended) had evolved over the years. However, there was now a general consensus in support of a smaller Committee, as long as it were large enough to maintain some continuity and experience within the Committee whilst at the same time providing the opportunity to introduce new members. The role of Vice-Presidents was queried and is to be reviewed this year, but it was agreed that they

provided an element of continuity and, because of their experience of the Society, a valuable contribution to the Committee's deliberations.

Several ideas were put forward about the number and type of Committee meetings, including various e-communication methods, but after much discussion it was decided to retain three meetings per year.

After a long discussion, the Committee voted unanimously for the following:

Regarding the size and number of Committee meetings:

- There was no substitute for face-to-face meetings and therefore the number of meetings per year would remain at three, with the possibility, if required, of an additional meeting confined to one or two notified items, on the day of and prior to the AGM.
- Notionally, the number of Elected Members and Vice-Presidents would be reduced by not electing members to the maximum number of positions allowed by the Constitution. (The aim would be six Elected Members (ten allowed) and three Vice-Presidents (six allowed).)
- The following officers would attend meetings by invitation or when they wished to contribute: Meetings Secretary, Conservation Officer(s), Membership Secretary and the four Editors. Such persons would retain their voting rights when they attended.

These practices would take effect from the first meeting after the AGM 2005 and would be reviewed within two years. None of these practices offend against the constitution.

Regarding Committee expenses:

- Any Committee member wishing to claim expenses for attending a Committee meeting may submit a formal application.
- Claims should include the cheapest reasonable travel expenses, whether car, rail or air, and the cost of bed and breakfast where this is unavoidable up to a maximum of £40 per night. Other meals would not be paid for.
- The Treasurer would honour claims that conform to the guidelines up to a maximum total of £100 per meeting. Any Committee member wishing to claim above £100, or any other reasonable departure from the guidelines for special reasons, must discuss their proposed claim in advance with the three Executive Officers.

GREENFIELD FUND: At last the Greenfield Fund has a formal constitution. Although set up in 1975, the Fund had been run entirely on the basis of the letter from the Fund's founder, Mrs Elizabeth Greenfield, which accompanied her generous donation in memory of her father-in-law. Although the present Secretary started the work some years ago, we have to thank Prof. A.C. Wardlaw for finalising the work and presenting a draft Constitution to the Committee, together with a joint application form for both the Greenfield and Centenary funds. The Committee accepted both of his documents with some amendments. The President expressed the appreciation and thanks of the Committee to him for his work, and this long-running subject is now concluded.

ORGANISATION OF FIELD MEETINGS: The agreement form for the supervision of minors attending meetings in the absence of a legal guardian was finalised and procedures for its implementation were agreed. It is now in use. The document giving guidelines to leaders for the organisation of meetings was revised to take into account the implementation of the 'Minors' form.

FERN IDENTIFICATION CARD FOR BEGINNERS: A foldout, laminated card with images and text for the identification of ferns was in production by the Field Studies Council (FSC). Written by one of our members, Dr J.W. Merryweather, it is aimed at those with little or no knowledge of ferns. The card will carry the BPS logo and information about the Society, and we will be able to make an initial bulk discounted purchase of the cards with the option to buy more. These will be offered to the membership through Merchandise when they are available.

WEBSITE DEVELOPMENT: The concern about the website expressed at the 2004 AGM was taken very seriously by the Committee. At the January 2005 meeting, Mr A.C. Pigott gave a presentation on the present contents of the website and on possible future developments. A small Website Advisory Group, Mr A.C. Pigott, Mr F. McGavigan, and one other non-Committee member at their invitation, has been set up. Mr M.G. Taylor will be Assistant Editor of the website. Objectives for the group were agreed, and A.C. Pigott, on their behalf, will submit a report on the group's progress to the Committee at its meeting in June 2005.

MEMBERS' QUESTIONNAIRE AND A PROPOSAL FOR A PLANNING MEETING: As the result of a discussion on the possible reasons for the drop in membership numbers in 2004 (a fall from 790 to 750 at the time of discussion), it was suggested that the Society should be pro-active and seek information about members' expectations from the Society, their comments on present activities, and at the same time welcome their suggestions for additional ones. Mr R.G. Ackers prepared a questionnaire together with a paper proposing a Committee meeting to plan future developments of the Society. The Committee welcomed his initiative. Members received the questionnaire with the *Bulletin* (2004, Vol. 6, No.3). The planning meeting will be held when the results of the questionnaire are known.

RETIREMENTS: Notices of retirements were received from Mr R.J. Cooke, as Conservation Officer and Recorder for the Society, and from Mr S.J. Munyard, as Booksales Manager, both with effect from this AGM. Whilst we have been successful in finding replacements for R.J. Cooke, in the persons of Dr F.J. Rumsey and Dr H.S. McHaffie, who are to share the responsibilities of Conservation Officer, with F.J. Rumsey also being the new Recorder, we have not been so fortunate in finding a replacement for S.J. Munyard. The Committee felt strongly that it would be a shame if Booksales should founder, and although Mr Munyard was unable to give the time required to run Booksales as he had done in the past, he has said he was prepared to carry on with second-hand books sales on a 'what-comes-his-way' basis for the time being. His offer has been accepted with gratitude, but the search must go on for an eventual replacement. (Members are referred to the note under 'Booksales' in the Secretarial Notes in *Bulletin* 2004, Vol.6, No. 3.)

Mr A.R. Busby had also given notice that after 31 years of representing the Society at the Southport Flower Show, the 2004 Show would be his last. However, he did save the Committee one job, that of finding a successor. Dr Michael Hayward has kindly agreed to take over. Dr Hayward is arranging the purchase and design of new display boards for use at the Show.

I am sure that this meeting, on behalf of the rest of the Society, would want to thank R.J. Cooke, S.J. Munyard and A.R. Busby for the magnificent work they have done for the Society during their periods in office.

OBITUARIES: Finally, it is with sadness that we announce the death in 2004 of Mrs Audrey Piggott, author of the very beautiful book, *Ferns of Malaysia in colour*. Her husband, John Piggott, who took the photographs for Audrey's book, kindly offered her fern library to Booksales, and her fern herbarium has gone to the Royal Botanic Gardens at Kew.

The Committee were also saddened to hear of the death of Mr Jeff Whysall. He had been an active member since 1984 and was in frequent attendance at Midland Region meetings. In spite of a long running illness and recent surgery, he was able to assist with manning the Society stand at the NEC Show in 2004.

Just a few days into 2005, Alison Rutherford reported the death of Allan McG. Stirling, a Scottish member who laid claim to fame in the Society by discovering *Polypodium australe* in Scotland for the first time.

In answer to a question on the future of Booksales, whilst no-one had yet been found to take on new books, Mr B.D. Smith noted that the sale of Special Publications and the coming FSC Fern Card was being transferred to Merchandise, and would be included in the next listing of items.

F. McGavigan reported that the third person to join the Website Advisory team was still being sought, emphasising that technical expertise was not necessarily a pre-requisite, but rather someone with ideas as to what should be on the website and how it might be acquired. A volunteer would be welcome. Communication within the group would be by e-mail. The Chairman said that the website was important, not only as a service to the membership but also to the wider world.

The Secretary's report was approved, proposed by A.C. Wardlaw, seconded by R.W. Sykes.

Item 5 – REPORT OF THE HONORARY TREASURER (A. Leonard): The Treasurer had submitted the draft summary accounts for the year ending 31st December 2004, and these were circulated. The following points were made in the explanatory notes he had provided, in addition to the regular notes that accompany the published accounts (see p. 338):

- The unaudited accounts do not show figures for either *The BPS Bulletin* or *The Fern Gazette*, as these figures are not yet available. Assuming that their costs are approximately the same as last year's, then instead of producing a profit of £11,634.69 in the Ordinary Account, we are likely to produce a reduced profit of approximately £5,500.
- The next *Gazette* was due in late 2003. This means that we still need to produce the equivalent of four issues in 2005. We are also planning to produce indexes for the *Bulletin* and *Pteridologist*. For these reasons we are likely to make a trading loss in 2005. Because of this we must keep a careful eye on our accounts. However, I do not feel it is necessary to increase subscriptions this year.

After a lengthy discussion, during which further detail than was available in the tabled accounts was requested, it was agreed that the accounts could be accepted as an interim statement subject to their completion and the inclusion of a Balance Sheet and a more detailed report on the accounts, together with the Merchandise and Booksales accounts.

The accounts were accepted subject to resolution of the above points and the completed and examined accounts were to be presented to the Committee for acceptance at its meeting in June. Proposed by A.C. Wardlaw, seconded by P.J. Acock. (For the final accounts see p. 337.)

Item 6 – REPORT OF THE MEMBERSHIP SECRETARY (M.S. Porter): Last year I confidently spoke of the consistency of BPS membership, especially of the fact that we always have about 75 new members each year. Something should have warned me that this was tempting fate but I continued blithely on calmly stating that our numbers were going to remain practically the same, or even rise, in 2004. Of course what happened was that this year we had barely 50 new members and our membership total has fallen away to 758, 36 fewer than last year and, though by no means a disaster, still rather less than had been hoped and lower than for some years. It is obviously impossible to account for why fewer people than normal joined the Society but it is interesting to note that already more new members have joined the Society in 2005 than did in the whole of 2004. Perhaps the answer is not to look at individual years but to calculate membership trends over more prolonged periods – five years at the least or perhaps decades.

Precise details for 2004 were: 34 Complimentary or Honorary members (no change), 11 Student members (4 down on 2003), 58 Family members (5 down on 2003), 88 Subscribers (3 up on 2003) and 567 Ordinary members (26 down on 2003), giving a total of 758 members. There were 53 new members. Losses resulted from the death of 6 valued members of the Society, 30 resignations, and the lapsing of 53 members. Reasons given for resignations nearly all fell into the same category aptly summed up by one ex member as "*old age and inflation*". However, one person resigned stating he could not belong to a society with a royal as patron. Lapsed members obviously do not give reasons but, as

lapsing almost always occurs after a very short membership, I assume such people find that the Society is not quite as they expected, or that their enthusiasm for ferns is short-lived.

In the light of experience I am not planning to make any forecasts about projected membership numbers for 2005.

STATEMENT CONCERNING GIFT AID: When the BPS was registered as a charity it became possible for us to claim Gift Aid on each member's subscription. Thus the Inland Revenue repays us 28 pence for every pound paid in as membership subscription. The rates are as follows: for each Full Member paying £20 we receive £5.60, for each Optional Member paying £16 we receive £4.48, for each Student Member paying £10 we receive £2.80, and for each Family Member making an additional payment of £2 we receive £0.56.

The few provisos are:

- Gift Aid is available only to members who reside in the UK.
- Members on whose subscription Gift Aid is claimed must be paying income tax or capital gains tax at least equal to the amount claimed.
- Members whose subscriptions are allowed as an expense in connection with their employment may not claim Gift Aid. (We have learned of this only recently. Members in this position who have already sent in their authorisation should let the Gift Aid Secretary know so that no further claims are made on their behalf.)

In 2003, 132 members authorised us to claim Gift Aid on their behalf allowing us to reclaim £673.68. In 2004, 164 members were involved and, as a result, the Society was £904.96 better off. We were also able to claim on two donations to the Society, giving us a grand total of £1,022.76. However, we have nearly 300 members who have not yet given us authorisation to claim on their subscriptions; in other words it is possible that we could benefit from a further £2,000 per year. Thus, I would ask all members who have not yet given the Society authorisation to claim on their behalf to do so this year.

B. Wright asked if Gift Aid could be claimed on Regional group subscriptions. In reply M.S. Porter confirmed that Gift Aid could be claimed, also donations made to the Society, including those made through Wills. J.W. Merryweather offered to put a note in the Pteridologist about Gift Aid.

The Membership Secretary's report was approved, proposed by A.M. Paul, seconded by F. McGavigan.

Item 7 – REPORT OF THE CONSERVATION OFFICER & RECORDER (R.J. Cooke): No matters to report for 2004. As R.J. Cooke was retiring at this AGM, the Chairman took this opportunity to thank him for his work as Conservation Officer and welcomed F.J. Rumsey and H.S. McHaffie as his replacement.

In answer to F. McGavigan, A.M. Paul reported that she holds a stock of BPS record cards. A.F. Dyer said that the Society needed to do more recording and the Committee should consider this. There were areas, such as Northamptonshire, that were under-recorded. Mrs B. Porter reported that she had records going back ten years for southern Manchester.

Item 8 – SUBCOMMITTEE (Permanent) REPORTS:

8.1 – MEETINGS SUBCOMMITTEE (P.J. Acock): 2004 can only be described as another triumph in the Society's history. Those that took part in the meetings experienced a programme as diverse and exciting as could be offered by a botanical society anywhere in the world, in my opinion.

The overseas field excursion to Trinidad took pride of place. What a magnificent place and we met such extraordinarily kind and generous people who gave so freely of their time. A special word of thanks must go to Dr Yasmin Baksh-Comeau and Graham Ackers, who put it all together.

The AGM meeting, hosted by Alison Paul, saw faces old and new. The programme, as ever, was well put together by Graham Ackers. A splendid meeting in the New Forest led by Andrew Leonard was followed by a great meeting in the Isles of Scilly, led jointly by Ian Bennallick and the Islands' recorder, Rosemary Parslow.

Those that attended the International Symposium at the Royal Botanic Garden, Edinburgh were able to meet friends old and new and to discover and discuss what is happening across all areas of pteridophyte research. The meeting was followed by an excellent tour visiting the garden of our retiring President, Alastair Wardlaw, and then moving on to south-west Scotland, all superbly choreographed by our triumvirate of Adrian Dyer, Alastair Wardlaw and Frank McGavigan. We were joined by members from the USA and Mexico.

The Herefordshire/Shropshire meeting drew large numbers of attendees all capably fielded by our hosts Clive Jermy and Martin Rickard.

The Southport Flower Show once again had a Society stand, manned for the last time by A.R. Busby and his team. We really must say an enormous thank you to Matt, who has manfully done this duty for 31 years! Due to Matt's unstinting efforts, this used to be the principle source of new members to the Society. We welcome Dr Michael Hayward, who is replacing Matt, and who has said, from the outset, that he will not be doing it for as long!

A Fern Reproduction Day at Reading University rounded off the year. We must pay tribute to Jennifer Ide for the exciting programme, and to our host, Dr Stephen Jury. A number of Stephen's students joined us for the day and it is to be hoped that some will have been motivated to grow to appreciate ferns or at least bear them in mind in their future research.

Once again special thanks are due to those who organised and led each of our meetings. It crossed my mind that the Society's officers played an enormous role this year and we must be mindful that we need to encourage our younger and newer members to attend and also to offer to take a lead. I can remember many of those people who were leading meetings this year attending meetings many years ago when they were not so knowledgeable. If you would like to lead a meeting, or have an idea you would like your committee to help you with, we would be only too pleased to hear from you.

It was agreed that a letter should go from the meeting to A.R. Busby to thank him for his work at the Southport Flower Show.

8.2 – Publications Subcommittee (Dr A.F. Dyer): In June 2004, the subcommittee met in Edinburgh to review the present state of Society publications, including the website, and to identify the priorities for future developments. A report of the meeting was presented to the Committee for discussion. Membership of the subcommittee comprises the editors of the three journals, of Special Publications and of the website, together with the Treasurer, the Honorary General Secretary and the President, who is serving as Acting Chairman. The role of the Subcommittee is to monitor publication policy and promote a sustainable co-ordinated publication programme that makes efficient use of the Society's financial and editorial resources and reflects the needs of the Society and its members. The objectives of the BPS publications and website collectively are to promote pteridology and the Society, to record BPS activities, to inform and interest members, to provide a source of pteridological information for the wider public, to publish original research in an internationally recognised journal, and to provide an outlet for members' own creativity.

Because of past difficulties in getting volunteers to take on editorial duties, the possibility of amalgamating journals was discussed but there was strong support for continuing with three journals under their present names.

Bulletin: A.M. Paul produced the 2003 Issue (No.2 of Volume 6) early in 2004, and the 2004 Issue (No. 3) has just been published. Issue No. 2 was 88 pages long, and Issue No. 3

is 84 pages, once more reflecting the increased level of activity within the Society. Even with over 80 pages, it is now difficult to fit in all the items and once again Alison has had to combine her editorial skills with the diplomacy necessary to reduce the length of many contributions. An Index to Volumes 1-5 prepared by Jonathan Crowe is now being edited. Preparation of the *Bulletin* is now a considerable and time-consuming task and we are fortunate that Alison is still willing to do this for the Society.

THE FERN GAZETTE: Although Volume 17 Part 2 had recently appeared, dated 2004, no issues of *The Fern Gazette* were published during 2004. This was mainly due to a shortage of submitted papers. This lack of material is largely due to factors beyond our control, including the declining numbers of professional pteridologists in Britain and elsewhere, and the need for the remaining researchers to publish in major journals that are frequently cited in other papers. Our failure over the last two years to maintain the normal schedule of two issues per year is a matter of considerable concern, not least because of the danger that a number of members and subscribers might resign if the situation were to continue. Fortunately, this will not happen. We have at an advanced stage of editing more than 20 papers based on talks given at the 2004 BPS Symposium '*Ferns for the 21st Century*'. In the meantime, other papers are being processed as they come in and an issue of non-Symposium papers will be produced as soon as it is complete. We expect all these papers to be published in 2005 or early 2006, by which time we will have made up the deficit of *The Fern Gazette* issues. In order to stimulate more contributions for future issues, we have begun a process of inviting authors to write mini-reviews on recent advances in specialised pteridological topics. We hope in this way to broaden the scope of the journal and increase the number of times it is referred to in other publications. Professor Mary Gibby and Andrew Leonard will continue to share the editorial responsibilities, with the assistance of peer reviewers, some BPS members acting as proof-readers, and, in the case of Symposium issues, session organisers.

PTERIDOLOGIST: Volume 4, Part 3 appeared during 2004 with 32 attractive pages of interesting and entertaining information interspersed with more than 60 colour illustrations. The Editor, Dr James Merryweather, is the creative force behind the publication but he is supported as needed by a group including Dr Yvonne Golding and Adrian Dyer as sub-editors and other BPS members who assist with proof-correction. An Index to Volumes 1-3 has been prepared by Michael Searle and Alastair Wardlaw and will soon be published and issued free to all members. Volume 4, Part 4, is being prepared for publication in July. *Pteridologist* provides an opportunity for members to share their knowledge and experiences and the Editor would welcome contributions, short or long, on any aspect of pteridology, especially from first-time contributors.

SPECIAL PUBLICATIONS: Work continues on the final stages of preparation of the account of *Polystichum* cultivars: *Polystichum cultivars: Variation in the British Shield Ferns*. Begun by Jimmy Dyce, this has been expanded and updated by Robert Sykes, Martin Rickard and Peter Barnes, in conjunction with Barry Thomas as Editor of Special Publications. Publication is scheduled for later in 2005. We would like to publish other titles and several suggestions have been made including themes ranging from *Polypodium* varieties to Ferny artefacts and Ferns for the home. A new Fern Atlas, currently under consideration by the appropriate Subcommittee, would be another publication under this heading. However, nothing can be achieved without members who are willing to take on the task of preparing the publications, whether as author or as a collator of others' articles. Anyone who has an idea for a Special Publication and who would be prepared to see the project through, should contact Prof. Barry Thomas to discuss its suitability.

WEBSITE: We recognise that the creation of a first-class website is of critical importance to the Society at a time when the web is the first source of information for an increasing proportion of the population. The website must provide communication and information for the membership, but it is also a 'shop-window' to present the Society to the outside world,

and, increasingly as pteridology in universities declines, it must also provide an easily accessible source of information for anyone seeking information about pteridophytes. Discussions through the year have led recently to the formation of an Advisory Group to support the Website Editor, Anthony Pigott, in his work to maintain and develop the website. This group will be responsible for agreeing the objectives of our website, prioritising requirements and helping to take the steps necessary to achieve those objectives. This may include commissioning specific items. In order to be able to take account of the requirements of the membership, it would be helpful if any member with views on what the website should provide would make those views known in their replies to the BPS Questionnaire or directly to Anthony Pigott.

OTHER PUBLICATIONS: *Book Reviews*. Book reviews are now organised by Prof. Mary Gibby, Editor of *The Fern Gazette*. Members who are aware of a new book that they think should be reviewed should contact Mary, who will write to the publishers requesting a review copy. A decision will then be taken as to whether the review should appear in *The Fern Gazette*, *Pteridologist* or both. Mary Gibby or James Merryweather, as appropriate, will then be responsible for obtaining and editing a review. Members who wish to submit a review of a new book should contact Mary Gibby first so as to avoid possible duplication.

Leaflets. We recognise that several leaflets need revising or replacing and there are ideas for new ones, but there have been other matters concerned with publications, as described above, that were considered to be more urgent. A start has been made on revising two leaflets and more progress will be made when someone can be found, not necessarily within the present Publications Subcommittee, who has the interest and time to take on this responsibility.

DISTRIBUTION: A vital aspect of our publication output, but one that is often taken for granted, is distribution to members. Distribution of some of our major publications, together with the many notices that keep members informed about the Society's other activities, has once again been carried out by Patrick Acock, to whom we are very grateful.

CONCLUSION: Finally, I would like to point out two things. First, our publications list is an ambitious one for a Society of considerably fewer than 1,000 members and a modest subscription rate. Secondly, it depends entirely on the editorial resources and other assistance available within the membership. Without the dedication and hard work of the editors and their assistants it would not be possible to produce these publications and our grateful thanks are due to them. However, more volunteers are always welcome and we would be pleased to hear from any other members who would like to become involved in the publication side of the Society's activities.

B.A. Thomas announced from the floor that publication was due in 2005 of N.A. Hall and M.H. Rickard's bibliographical compilation of Pre-1900 fern books. Based on a proposal by A.C. Wardlaw, the Society may also soon be in a position quickly to prepare and present in an inexpensive format a provisional pteridophyte atlas based on information in the BSBI's New Atlas of the British & Irish Flora *(2002).*

J.W. Merryweather made a plea for no more articles to be submitted on bracken to the Pteridologist*! He would like to see more articles expressing opinions, possibly even controversial ones!*

R.G. Ackers requested that editors should acknowledge the receipt of articles and, later if necessary, confirm or otherwise the inclusion of the articles in their journal.

B.A. Thomas said that he was against the publication of complete journals on the website. This could eventually be disastrous, especially in terms of losing Subscribers. F. McGavigan replied that the recently formed Website Advisory Group would be considering this matter. It was not policy at the moment.

8.3 – FERN VARIETIES NOMENCLATURE SUBCOMMITTEE (A.R. Busby): Apart from brief telephone conversations, there have been no meetings of this subcommittee during 2004. Unless some matters that require discussion present themselves during 2005, it is unlikely that this sub-committee will meet.

The Meetings, Publications and Fern Varieties Nomenclature Subcommittee reports were approved, proposed by M.S. Porter and seconded by Mrs J. Neal.

Item 9 – SUBCOMMITTEE (ad hoc) REPORTS:

9.1 – FERN ATLAS SUBCOMMITTEE: No report. See Secretary's Report, Item 4.

Item 10 – COMMITTEE-APPOINTED OFFICERS AND MANAGERS:

10.1 – ARCHIVIST (A.R. Busby): I am pleased to report that excellent progress has been made during the last year. With the assistance of Martin Rickard, a quantity of material that we considered to be unimportant was discarded. This resulted in a reduction of the volume of material stored and, consequently, we have been able to reduce the costs of storage by nearly one half. Work is now taking place to catalogue the pressed fronds so that they can be placed in a suitable permanent storage facility. The Committee is pursuing various channels in order to find suitable storage for the remainder of the Archive at little or no cost to the Society.

R.G. Ackers reported from the floor that the Royal Horticultural Society had agreed to take the approximately 800 pressed cultivar fronds into their herbarium, where they would be safe and secure. He had agreed with the Keeper of the herbarium to work one day a week to curate the collection and would like a helper. There was no pay, but there would be some perks!

M.H. Rickard said that the Society's donation had triggered a reaction at the RHS Wisley. A frond collection was being made from all the ferns in the gardens to be added to the herbarium.

10.2 – BOOKSALES (S.J. Munyard): No report received.

10.3 – MERCHANDISE (B.D. & G. Smith): Through 2004 we continued to provide a service for BPS members much as we had done during 2003. We introduced four new ranges – BPS pens, a new style bookmark, the BPS fern video and new fern notelet paper designed by Anne Wright. Also, thanks to Anne, we continued to add new varieties of her lovely fern greetings cards. The merchandise list now boasts some 14 ranges and a total of over 50 individual products. We had to re-issue the merchandise list twice during the year, and members will have received these either through routine mailings, or when we fulfil orders. There is an up-to-date copy on the BPS website for those with Internet access.

Mail order continues to be our main outlet for sales, and, as well as UK members, we have had orders from Canada, USA, Latvia and Eire. However, we did sell items face-to-face to members by making use of the national meetings at Hereford and Reading as well as our local East Anglian and South-East regional meetings. Also, as usual, we sold several items (not clothing) to the general public while manning the BPS stand at the NEC Gardeners' World Live! in June. As a new initiative, colleagues in the north sold a number of items at the Southport show and at their Leeds and North-West Regional Group AGMs. Overall during 2004, sales income amounted to nearly £800, slightly less than the £1,000 for 2003.

So, what's new for 2005? Well, following the tradition of launching new items at our AGM, we have followed up members' requests by introducing a fleece with embroidered BPS logo and, in a small effort to help the environment, we have produced BPS labels for re-addressing envelopes. As a new venture, we will be selling the BPS Special Publications, both the existing stocks and new titles. We are also holding a sale of old stock, with 50% or more off a number of BPS products including small tee shirts, small sweatshirts and several BPS Centenary items – real bargains!

Finally, if anyone has any ideas for items they would like to see of a 'ferny' nature, please do let us know.

M.S. Porter asked whether members knew that Special Publications were now available from Merchandising. B.D. Smith replied that a new Merchandise list including Special Publications had recently been prepared. This would be on the website shortly and copies sent with the next general mailing. Also, members ordering items were sent an up-to-date copy of the list. The possibility of a separate mailing was discussed, but it was noted that this would cost well over £100.

10.4 – PLANT EXCHANGE (R.G. Ackers): The Plant Exchange List was compiled and distributed in October 2004. This followed two mailings requesting plants for offer. The first, included with the *Bulletin* mailing in March 2004 excluded from the reverse the form required for completion. This unfortunate omission caused considerable confusion. Despite this, some potential participants responded without the form using e-mail. However, a second problem occurred at the end of March 2004, when as a result of a computer failure, the organiser lost all of these e-mails. These problems necessitated a second circular, which was distributed with the *Pteridologist* at the end of August 2004.

Once again, a Wants List was included in the Plant Exchange List. The number of wanted taxa reduced from 56 in 2003 to 40 in 2004. From 2005 onwards, the intention is to publish the Wants List in the *Bulletin* to increase exposure and hopefully thus increase the chances of fulfilment.

Statistics for taxa offered are shown below.

Status Code	Plant Status Description	No. in 2003	No. in 2004
Sp0	Sporeling less than 1 year old	3	10
Sp1	Sporeling 1-2 years old	8	13
Sp2	Sporeling 2-3 years old	10	13
Esp	Established plant	3	11
Bul	Bulbil	7	0
Rhs	Rhizomes	9	11
	Plant status not stated by donor	21	0
	Totals	**61**	**58**

The statistics for participants are shown below. The participant categories are mutually exclusive. All categories receive a copy of the Plant Exchange List.

Category of Participant	2003	2004
Donors only (thus only offering plants)	8	6
Donors also having Wants	7	5
'Wanters' only (thus not offering plants)	9	3
List requesters only (neither offering plants nor having 'wants')	10	16
Total Number of Participants	**34**	**30**

Based on the size of the BPS membership, participation numbers seem low, particularly considering the opportunity to acquire plants at no cost other than postage. Furthermore, numbers dropped slightly in 2004 over 2003, but this may have been due in part to the problems referred to above.

The intention for 2005 is to include the form for the next list with the *Pteridologist* mailing in the summer, and to produce the Plant Exchange List 2005 a couple of months later. A form to solicit Wants will be included with the BPS October/November mailing, for potential inclusion of a Wants List in the *Bulletin* for 2005, distributed in the early part of 2006.

10.5 – SPORE EXCHANGE (B. & A. Wright): The exchange continues to be a popular service offered to members. The breakdown of the data from 2004 is as follows, with the figures for 2003 in square brackets. There were 133 [148] requests received and processed, resulting in the sending out of 2,247 [2,548] packets of spores. Of these, 99 [114] requests were from UK members (England 78 [95], Scotland 8 [13], Wales 13 [6]) and 34 [53] from overseas. This reaffirms the international nature of our exchange. The overseas requests were from Australia 1 [1], Austria 3 [1], Belgium 1 [1] Czech Republic 1 [1], Denmark 1 [2], Eire 2 [2], Estonia 1 [1], Finland 1 [0], France 4 [3], Germany 3 [5], Japan 1 [0], Latvia 1 [0], Luxemburg 1 [1], Netherlands 2 [1], Poland 1 [2], Spain 1 [1], Switzerland 1 [0], USA 6 [9]. Out of the 679 [649] taxa on the 2004 list we had requests for 571 [575] them.

Unfortunately, the spore list was sent out relatively late in the season owing to a delay in the publication of the *Bulletin*. We hope this did not inconvenience growers by delaying the time at which they could sow their spores.

For the future we are considering adopting the approach of many of the seed exchanges that we are aware of. With these exchanges the list is available only on request and is sent out as a separate mailing by the seed distribution organisers. Our intention would be to send out a spore list request form with the *Pteridologist* in the summer and would then send out lists before Christmas to all those wishing to receive one. We would then be able to guarantee a distribution start date of the 1st February. This would enable us to complete the spore distribution by the end of April when we are becoming busy with other things ourselves. It would mean that we are busiest during February dealing with the initial rush and that we would slowly wind down during March and April. There are a number of advantages to this system. One is that we do not produce and print more than 700 lists to satisfy 130-150 requests. This is a waste of paper, ink and postage. Also, we would be in control over the whole process and would not be reliant on the publication date of the *Bulletin*. We would also plan to allow e-mail requests for the lists and to send the lists out as attachments. We would still need to have paper copies of requests along with the two 1st class stamps to cover the cost of return postage and the envelope we use to return spores. But, at a cost of two stamps, that is a lot cheaper than the £5.00 or £2.50 charged by the Alpine Garden Society and Scottish Rock Garden Club respectively.

Grateful thanks to all our loyal band of donors and thanks to all of the patient requesters, particularly those early birds that get caught up in the initial rush period immediately following the publication of the list.

The general feeling of the meeting was that the proposal set out in the above report, despite the possible small cost implication, was eminently sensible and its implementation would be welcomed.

10.6 – HORTICULTURAL INFORMATION OFFICER (A.R. Busby): I was pleased to be able to assist the Curator of the Museum in Chepstow with information on that great fern grower, E.J. Lowe. It was part of an exhibition of local history in Monmouthshire.

Other requests for help were mainly for advice on the cultivation of hardy ferns. Recently I had a query from a researcher asking for information on the distribution of *Dryopteris* in the Northern Hemisphere. This has been passed on to a number of academics in the Society, but if any members feel that they are in a position to help, kindly let A.R. Busby know.

All the reports in this item were approved, proposed by B.A. Thomas and seconded by A.M. Paul.

Item 11 – ELECTION OF OFFICERS, COMMITTEE MEMBERS & INDEPENDENT EXAMINERS: With the exception of Mr R.J. Cooke, Conservation Officer and Recorder, who had

tendered his resignation, all the present officers of the Society were eligible to stand for re-election and had indicated their willingness to stand. The Chairman thanked R.J. Cooke for his work for the Society. Dr Fred Rumsey and Dr Heather McHaffie were nominated by the Committee to share jointly the position of Conservation Officer and F.J. Rumsey would also serve as Recorder. Proposed by R.W. Sykes, seconded by Mr H.C. Shepherd, all were elected unanimously.

Mr A.R. Busby had completed his term as Vice-President and was thanked for his contributions to the work of the Committee during his period of office.

Of the present elected members of the Committee, Mr S.E. Czeladzinski, Mr M.L. Grant, Mr S.J. Munyard and Mr P.H. Ripley retired, being the longest serving members of the Committee (elected 2002). The Chairman thanked them for their service to the Society. Mr A.R. Busby (Proposed Miss J.M. Ide, seconded Mr P.H. Ripley) and Dr Michael Hayward (proposed Mr A.R. Busby, seconded Mr R. Smith) were nominated to be Elected Members of the Committee. There being no further nominations from the floor, they and the Elected Members eligible for re-election (R.G. Ackers, Dr Y.C. Golding, F. McGavigan and B.D. Smith) were elected unanimously en-bloc, proposed by Mr M.S. Porter, seconded by Mr B. Wright.

Dr N.J. Hards was re-elected unanimously as Independent Examiner. Proposed by B.A. Thomas and seconded by Mrs J. Neal.

Item 12 – ANY OTHER BUSINESS:

12.1 – RESIGNATION OF SECRETARY: The Chairman announced that the Secretary, Miss J.M. Ide, had tendered her resignation with effect from the Annual General Meeting in 2006. It was her wish to contribute in other areas of BPS activities, which she was unable to do at present owing to the Secretarial workload. The work of the Secretary had grown greatly in the past seven years, and it was felt that this was an opportune moment to divide the work into two parts, one having responsibility for organising Committee meetings, the AGM, and writing the Minutes, the other having responsibility for the administrative work of the Committee. It was agreed that the Secretary should write a note, for insertion with the next mailing to the membership, outlining the two positions and seeking volunteers.

Before closing the meeting the President addressed the membership:
"I do not apologise for this long meeting. It is a reflection of the impressive level of activity in our Society. In closing the meeting it would be wrong if I did not, on behalf of all the members thank all those whose effort, time and skill made all these activities possible. Without them there would not be a Society worth belonging to. The regional programmes, the national programme, the publications, the sales and exchanges, and the vital but less obvious activities like membership administration, managing the funds, observing the requirements of our Charitable status, interacting with other societies and organisations and others, all require a great deal of hard work. The amount of work is probably not fully appreciated by those who have never been directly involved. Since being on the Committee I have been repeatedly impressed by the level of commitment that some members have towards not only ferns but the BPS as well. I am not going to single out names because I would inevitably leave out several others deserving mention. Just look at our publications, programmes and other activities and use your imagination. However, none of these people will go on giving their services indefinitely. Our activities are quite ambitious for a relatively small society and if we are going to maintain them, we need new people coming forward from the membership to take over these tasks, starting with the post of Secretary. Meanwhile, many thanks to all whose who make membership of the BPS so enjoyable for the rest of us."

There being no further formal matters for consideration the Chairman declared the meeting closed at 16.10 hours.

Jennifer M. Ide
Hon. Gen. Secretary

FINANCIAL STATEMENT AS AT 31 DECEMBER 2004

ORDINARY ACCOUNT

2003		2004
	INCOME	
£15,674.54	Subscriptions	£15,699.54
504.10	Interest	602.40
0.00	Booksales	1,000.00
0.00	Spore Exchange	0.00
147.80	Merchandise	121.20
0.00	Plant Sale	0.00
673.68	Inland Revenue Gift Aid	1,022.76
0.00	Donations	417.76
£17,000.12	**TOTAL INCOME**	**£18,863.66**
	EXPENSES	
3,532.25	Pteridologist	3,413.32
7,474.27	Fern Gazette	1,418.18
3,819.60	Bulletin	4,497.05
405.59	Printing & Stationery	620.26
419.76	Administration & Postage	1,125.26
97.25	Subscriptions to Societies	107.00
0.00	Plant & Spore Exchanges	0.00
318.21	Meetings	317.90
2,000.00	Merchandise	4.60
0.00	Booksales	0.00
463.69	Trustees' Expenses	911.19
725.08	Archive Storage	705.00
£19,255.70	**TOTAL EXPENSES**	**£13,119.76**
–2,255.58	Balance (income minus expenses)	5,743.90
16,682.34	Brought forward from previous year	14,426.76
£14,426.76	**Total in Ordinary Account**	**£20,170.66**

CENTENARY FUND

203.70	Interest	291.78
0.00	Grant	–500.00
43.00	Donation to Fund	0.00
0.00	171 World of Ferns 171	0.00
6,740.97	Brought forward from previous year	6,987.67
£6,987.67	**Total in Centenary Fund**	**£6,779.45**

GREENFIELD FUND

64.35	Interest	91.61
0.00	Grant	0.00
2,129.67	Brought forward from previous year	2,194.02
2,194.02	**Total in Greenfield Fund**	**£2,285.63**

PUBLICATIONS ACCOUNT

198.85		Interest		303.39
306.81		Offprints		365.41
33.75	*137*	Fern Names & Their Meanings	*124*	45.00
61.00	*296*	Cultivation & Propagation	*288*	34.00
22.20	*809*	History of British Pteridology	*804*	26.40
7.50	*426*	BPS Abstracts & Papers	*425*	7.50
54.96	*15*	CD Rom – BPS Minute Book	*12*	30.00
6,580.68		Brought forward from previous year		7,265.75
£7,265.75		**Total in Publications Account**		**£8,077.45**

NOTES TO THE ACCOUNTS

1. The accounts reflect the subscriptions actually received in the year.
2. BPS Booksales had assets of £4,153.00 (£5,361.24) at 31.12.2004.
   BPS Booksales repaid an advance of £1,000 (made in 1998) into the Ordinary Account.
3. The Society also possesses the following assets:
   Back issues of the *Bulletin*, *Fern Gazette* and *Pteridologist* valued at approximately £2,000.
   The editor of *Pteridologist* has a computer valued at £1,133.99 in 2001.
4. The Society made a grant to Julie Barcelona from the Centenary Fund of £500.
   For further details see *BPS Bulletin* 2004 volume 6 number 3 page 256.
5. The numbers of copies of publications are shown on either side of the title.

Andrew Leonard, Honorary Treasurer

I have examined the accounting records maintained by the Treasurer of the British Pteridological Society for the year ending 31 December 2004, and can certify that the accounts presented to me are in accordance with the books and records.

Dr Nick Hards, Examiner, 19th September 2005

MERCHANDISE ACCOUNTS

The following Merchandise accounts for 2004 are presented separately, as the Merchandise organisers have a separate bank account and do their own accounting.

MERCHANDISE ACCOUNT

Income	848.13
Expenditure	–705.08
Surplus for year	143.05
Transfer to General Fund	–121.20
Brought forward from previous year	3,211.34
Balance carried forward	**£3,233.19**
Represented by cash	943.19
Represented by stock	2,290.00

BOOKSALES ACCOUNTS

The Booksales accounts are not shown separately. Not all the appropriate figures are available due to the traditional method of record-keeping by Booksales Organisers. In future, records will be kept in a different way so that annual accounts can be presented.

THE AMERICAN FERN SOCIETY

The AFS invites all readers of this *Bulletin* to join the American Fern Society. You are welcome to visit the AFS website: amerfernsoc.org. Regular members receive *Fiddlehead Forum* five times a year, a newsletter published for those who are interested in growing ferns, hunting for them and expanding their knowledge of ferns. Journal members also receive the scientific quarterly *American Fern Journal*. Membership costs $19 and $32 per annum respectively for members residing outside USA, Canada or Mexico, including postage for airmail-assisted delivery. For particulars please write to Dr George Yatskievych, Missouri Botanical Garden, P.O. Box 299, St Louis, Missouri 63166-0299, USA (george.yatskievych@mobot.org). Online credit card payment is now available for the AFS via the AFS website.

AFS SUBSCRIPTION PAYMENTS: Our societies have an exchange arrangement whereby members of the BPS can pay their AFS subscription through the BPS Membership Secretary and *vice versa*. To take advantage of this, prospective members residing in Great Britain should contact Mr M.S. Porter, 5 West Avenue, Wigton, Cumbria CA7 9LG (Membership@eBPS.org.uk).

BPS PLANNING MEETING

Organisations of any size routinely perform planning exercises in order to take stock of their performance and to formulate their future direction. These planning processes can be anything from guesswork (inspired or not!) to a meticulous analysis and interpretation of market environmental factors. To my knowledge the Society has never recognised nor performed a separate exercise called 'planning'. Although we do discuss future plans at committee meetings, these discussions are often subsumed within the more urgent nature of current business. It was in this climate that the committee agreed that a meeting focused solely on planning could be worthwhile. The meeting was held in Edinburgh on the 3 December 2005.

Our starting point was the responses we received to the Members' Questionnaire distributed with the previous Bulletin. Adrian Dyer gave a summary of these responses in his 'President's Letter 2005' included with the autumn mailing. I produced a 'Report on Members' Questionnaire Responses' for discussion at our Committee Meeting on 18 June 2005. Some of the Officers also produced separate analysis notes on their areas – Meetings, Publications, Website, and Merchandise. The members' views summarised therein will be considered by these Officers in the course of their activities. All of these documents are available to members, so please let me know if you would like copies (my contact details are on the inside front cover).

One of the ironies of planning meetings is that they require planning (!), and therefore we prepared an agenda. However, it is an unwritten rule of planning meetings that they will not go according to plan! This one was no exception, for reasons I will explain shortly. However, most of the morning did go according to plan, resulting in two very useful sessions conducted in an informal 'brainstorming' way.

For the first session, we performed a SWOT analysis to take stock of our current situation. This technique requires us to focus on our Strengths and Weaknesses (these are both internal to the Society), and the Opportunities and Threats presented to us from the outside world. The results (in no particular order) are shown in the following chart.

Strengths	**Weaknesses**
Regional groups	Lack of succession planning
Good meetings	Shortage of volunteers
Field botany	Lack of task ownership
Horticultural experience	Size of membership (lack of critical mass)
Journals	Tendency to 'box above our weight'
People (some!)	Behind with *Gazette* production
Amateur/professional relationships	Website
BPS is the only British fern society	Lack of BPS publicity/promotion
Good value for money	Lack of external sales (of journals)
Membership size stable	We are too exclusive and inward looking
Charitable status	We get too bogged down in admin detail
Our heritage	
Opportunities	**Threats**
Wide geographical spread in UK and abroad	Decreasing number of professional pteridologists
Possible increase in interest in ferns	Aging membership
Promote BPS as a gardening society	Professionalism of BSBI and Plantlife
Promote at garden centres & fern gardens	Changing fashions result in possible reduction in interest in ferns
Increased public interest in (plant) conservation	
More recording	
Aid in identifying ferns of unknown provenance	
Funding opportunities (because of charitable status)	

During the second session we focused on our Critical Success Factors (CSFs). These are the activities that an organisation must absolutely 'get right' in order to survive; typically there are seven or eight. Again, in no particular order, these are shown below.

- Effective administration by the recruitment of volunteers and good succession planning.
- Effective financial management.
- A strategic planning function.
- The timely production of attractive and stimulating journals.
- An informative website that is kept up to date.
- Running successful meetings enjoyed by attendees.
- Maintaining membership levels.

Although our third session was planned, it was not intended to dominate the rest of the day as it did. The agenda item was rather pompously called 'Officer succession planning and the shortfall dilemma'. Ideally, there should be a 'blue sky' aspect to planning meetings, but at this one we were faced with a more urgent problem. Several of our Officers are either resigning, or have indicated their intention to do so. Replacements were proving difficult to come by, and so we decided to focus on how to fill these gaps. Some of the points emerging from our discussion were:–

- All Officer post are unpaid and thus voluntary, therefore we depend on the goodwill of talented members to fill these posts.
- We do have several individuals who over the years have provided an outstanding service to the Society.
- Some of the jobs can be very onerous, and it was with this in mind that a decision was taken to split the job of Secretary (there was a circular about this with the *Pteridologist* mailing).
- Although Officers can of course resign at any time, some of the jobs seem to be open-ended, with postholders continuing for many years.
- It was highly desirable that potential Officers serve as elected committee members first, and so more 'new faces' should be encouraged to join the committee.
- People recently retired from their main employment may welcome the new set of challenges provided by serving on our committee.
- The President should approach certain people in an attempt to fill some of the gaps occurring both now and in the future.

Whether or not this last activity will have been successful should become apparent at our AGM on 25 March 2006. The results of the planning meeting will be discussed at our committee meeting on 28 January 2006. As this article needs to go to press before that date, please contact our Secretary if you would like any feedback on that committee meeting.

Notwithstanding those committee discussions, it is hoped that the SWOT analysis and CSFs will act as guidelines for the actions of future committees. It is all too easy for Officers to become engrossed in short-term needs, thereby potentially losing focus on other matters of equal importance.

In conclusion I would like to thank all those who responded to our questionnaire, and urge more members to put their names forward as elected committee member candidates.

Graham Ackers

BPS PLANT EXCHANGE SCHEME
FERN 'WANTS' LIST

The Plant Exchange Scheme provides an opportunity for members to exchange surplus plants by offering plants and requesting 'wants'. The plants on offer were listed in the recently circulated 'Plant Exchange List – November 2005'. Members may still request this list by contacting me by e-mail to receive an electronic version, or by post enclosing an SAE to receive a paper version (contact details on the inside front cover). However, to be realistic, by the time of publication of this *Bulletin* some of the plants on offer will have run out.

In order to give requesters a greater chance of success, for the first time the 'wants' list is being published in the *Bulletin* to provide a greater exposure. Please would readers scan this list to see if they have (and can spare) any of the plants requested and then get in touch with the requester directly to arrange delivery.

Recipients should reimburse postage, so please count the stamps and assess the packaging costs before discarding. Round up for good measure and send the money (stamps or cheque) by return. Also, please inform me of any successful receipts. To some extent the publishing of this list in the *Bulletin* is experimental, and we need to ascertain the level of success before deciding whether to continue in future years.

FERN WANTS

The names of plants requested have not been validated.

Name	Requester
Adiantum aleuticum 'Laciniatum'	SP
Adiantum edgeworthii	JB
Adiantum formosanum	MC
Asplenium ceterach 'Cristatum'	TB
Asplenium scolopendrium 'Cornutum Abruptum'	TB
Asplenium scolopendrium 'Crispum Moly'	JF
Asplenium scolopendrium 'Crispum Robinson'	JF
Asplenium scolopendrium 'Crispum Variegatum Bolton'	JF
Asplenium scolopendrium cultivars	TB
Asplenium scolopendrium 'Glomerata'	JF
Asplenium scolopendrium 'Golden Queen'	JF
Asplenium trichomanes 'Incisum Moule'	SP
Athyrium filix-femina 'Fieldiae'	JF
Athyrium filix-femina 'Frizelliae'	JN
Athyrium filix-femina (rare varieties, good price paid)	SW
Blechnum spicant 'Congestum'	TB
Blechnum spicant 'Cristatum'	TB
Blechnum spicant 'Rickard's Serrate'	TB
Botrychium lunaria	MC
Camptosorus rhizophyllus	PK
Cheilanthes albomarginata	RJ
Cheilanthes bonariensis	RJ
Cheilanthes distans	JB
Cnemidaria horrida	SJ
Cryptogramma crispa	JN, MC
Cyathea (any)	EG
Davallia fejeensis	JB

Dicksonia (any except D. antarctica)	EG
Doodia media	JN
Dryopteris cristata	JB
Dryopteris submontana	JR
Elaphoglossum crinitum	SJ
Gleichenia sp.	SJ
Goniophlebium (Polypodium) subauriculatum	PK
Matteuccia (any)	EG
Onychium japonicum	JB, JN
Oreopteris limbosperma	EG
Pentagramma pallida	RJ
Platycerium (any)	EG
Platyzoma microphylla	SJ
Polypodium sp. (rare varieties, good price paid)	SW
Polypodium lachnopus	SJ
Polypodium lycopodioides	PK
Polystichum lonchitis	MC
Polystichum prescottianum	MC
Polystichum rigens	JN
Polystichum setiferum (rare varieties, good price paid)	SW
Pyrrosia (any)	EG
Pyrrosia polydactyla	SJ
Woodsia polystichoides	MC
Woodwardia unigemmata	JN

Requester's Contact Details

Where full contact details have not been given, please refer to the Membership List published in the 2004 *Bulletin*.

EG Miss Eleanor Glover, 31 Redannick Lane, Truro, Cornwall TR1 2JR.

JB Mrs J. Basil, 14 Royden Lane, Boldre, Lymington SO41 8PE. Tel. 01590 676538.

JF John Finch, 22 Victoria Street, Gillingham, Kent ME7 1EW.
E-mail: JOHNFINCH@BLUEYONDER.CO.UK.

JN Joy Neal, Llwyncelyn, Glandyfi, Machynlleth, SY20 8SS. Tel/fax. 01654 781203.
E-mail: joy@glandyfi.fsnet.co.uk.

JR Jeremy Roberts, Eden Croft, 2 Wetheral Pasture, Carlisle, CA4 8HU.
Tel. 01228 560164. E-mail: fjr@edencroft2.demon.co.uk.

MC Michael Collins, Long Leys Farm, Leys Road, Cumnor, Oxford OX2 9QG.
Tel. 01865 865809.

PK Pieter Kastelein, 'Cruach', Manse Brae, Lochgilphead, Argyll PA31 8QZ.
Tel. 01546 602388. E-mail: kastelein@btinternet.com.

RJ Rodney Johnson, 9 Barnfield Road, Bollington, Nr. Macclesfield, Cheshire SK10 5DZ.
Tel. 01625 574467. E-mail: r.johnson77@ntlworld.com.

SJ Stephen Jakusz, 14 Kaimes Gdns., Livingston Village, West Lothian, EH54 7D4.
Tel. 01506416508.

SP Mr S. Plant.

SW Stuart Worth, 17 Willow Tree Lane, Hayes, Middlesex UB4 9BD.
Tel. 078 341 54648. E-mail: STUART@EUROREP.CO.UK.

TB Tim Brock, 108 Rushes Road, Petersfield, Hampshire GU32 3AS.
Tel. 01730 301153. E-mail: TIM-BROCK@WSHSC.NHS.UK.

Graham Ackers

OBITUARIES

PROF. RODOLFO PICHI SERMOLLI 1912 – 2005

Rodolfo Emilio Giuseppe Pichi Sermolli died at the grand age of 93 on 25th April 2005, having just finished (with his wife Paola Bizzarri and Riccardo Baldini) a painstaking study of over 390 pages on the pteridophyta collected by Raddi in Brazil between 1817 and 1818. He unfortunately passed away just before it was published. He joined the BPS in 1954.

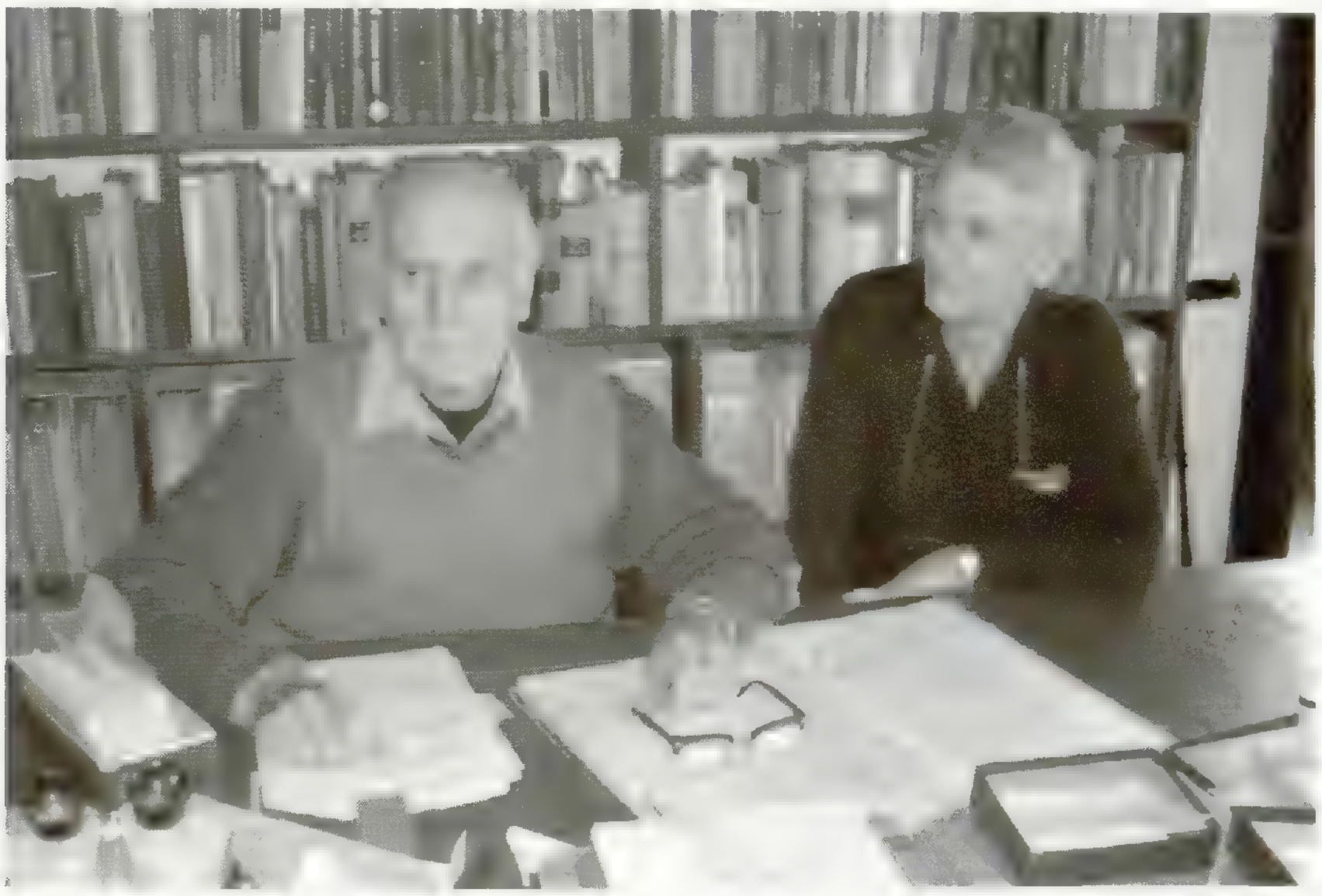

photo: R. Viane

Prof. Rodolfo Pichi Sermolli and his wife, Prof. Paola Bizzarri, working on the Raddi manuscript at their home in 2003

Rodolfo (affectionately 'Pichi' to the international fern fraternity) began studying Natural History at the Botanical Institute University of Florence in 1931. He had a wide interest in ecology, and the study of the flora and vegetation of the serpentines of the Alta Valle del Tevere became the subject of his thesis, completed in 1935. The previous year he assisted in an Italian mission for the agricultural study of Cyrenaica, and thus came into contact with the flora and vegetation of an arid zone. In 1937 he joined, as a plant collector, a four-month expedition to Lake Tana and the Semien Mountains in Ethiopia, where he also made observations on the ecology of the area. This, his first journey to Ethiopia, gave him both a basis and an interest in ferns of drier areas and the tropical African flora on which he worked so much later in his career.

During World War II, he saw active service but also lost all his possessions, including his library and manuscripts, when his apartment in Florence was destroyed. In 1947 he got a grant from the British Council to study in the libraries and herbaria of Kew and the British Museum. Most of his time was devoted to the study of his Ethiopian collections but he became a close friend of the then Deputy Keeper of Botany, Arthur Exell, whose speciality was also the Central Africa flora. He was also much involved in the activities of AETFAT (Association pour l'Étude Taxonomique de la Flore d'Afrique Tropicale) and was a secretary of this organisation from 1960 to 1963.

Around this time he became interested in nomenclatural questions, which led to his nomination as Secretary of the *Special Committee for Pteridophyta and Spermatophyta* set up by the 7th Botanical Congress in Stockholm (1950), and later of the *Special Committee for Pteridophyta* (1954–1987) of which he became the Chairman in 1987. Throughout his life, his opinions on these matters were always considered seriously. These investigations led to him becoming involved, as editor, with the fourth supplement of *Index Filicum* (1965).

He was an avid collector and built up an important herbarium; a plant press was always part of his baggage, even if there was no scheduled field trip on his itinerary! Besides his trips to Central and Southern Africa, he travelled also to the Himalaya, Central and South America, Malesia, New Zealand, Fiji and Hawaii, and throughout Mediterranean Europe. Pichi Sermolli contributed regularly to a small group organised by Walter Callé that exchanged herbarium material of pteridophytes, and published notes under the heading '*Pteridophyta Exsiccata – Étude critique des Fougères d'Europe*'. In the early sixties when a British and Irish group launched the *Flora Europaea* project, he was involved as regional advisor for Italy and not only attended all the annual symposia, but also organised the second Flora Europaea symposium in Genoa (1961), where he was then Professor.

When Pichi moved to the University of Perugia in the early 1970s he was able to devote more of his time to the classification of fern genera, resulting in his well known 1977 publication *Tentamen pteridophytorum genera in taxonomicum ordinem redigendi*, in which he presented his classification of all living pteridophyte families, a catalogue of all genera he recognised, and comments on phylogenetic affinities of families and genera and their taxonomic position. He kept abreast of other useful disciplines that might increase our understanding of fern relationships, publishing, in 1977 with A. & D. Löve, the *Cytotaxonomical Atlas of the Pteridophyta.* In 1986, when spore studies were beginning, Pichi Sermolli, together with Ferrarini, Ciampolini and Marchetti, published the *Iconographia Palynologica Pteridophytorum Italiae*, which not only contains 550 SEM photographs of spores of Italian pteridophytes, but also nomenclatural, cytological, distributional and ecological notes.

In 1993 he became the third President of the International Association of Pteridologists, following Herb Wagner. He also played an active role in the establishment of the Group of European Pteridologists (GEP) and in 1994 he co-organised the GEP European fern conference in Aulla (Italy) and field trip into the Apuan Alps.

Pichi was a prodigious worker. In about 75 years, he published over 160 scientific papers (listed by M.P. Bizzarri in *Webbia* 48. 1993) comprising a total of almost 7,000 pages. He was an avid correspondent, often explaining in detail his point of view, and he set an example to many botanists by his enthusiasm, tenacity and very well documented opinion. His presentations to international conferences were equally detailed, to the point of sometimes needing the chairman to remind him of the time! Best were those lectures given in his native tongue, one of which I enjoyed in Menorca in the late 1980s, when he discussed generic limits in Aspleniaceae. I did not have to understand Italian for his enthusiasm and sincerity to burst through; nobody was left unaware of his views!

I am grateful to Ronnie Viane, whose excellent obituary in *GEP News* 13 (2005), based on a review (in Italian) by Paola Bizzarri in honour of Pichi Sermolli's 80th birthday in 1993 (*Webbia* 48: 701-733), was the source of much of this information.

Clive Jermy

DR CHARLES DENNIS ADAMS 1920 – 2005

The field of Tropical Biology, and in particular Caribbean Ecology and Plant Systematics, lost one of its most erudite scholars with the passing of Dr Charles Dennis Adams on the 25th March 2005. Dennis was born on the 23rd March 1920 in Shinfield, Berkshire, England. He attended King's College, University of London from 1937 to 1939. In 1940 he aborted his studies and volunteered for Military Service in the British Army. Moving up the ranks to Commanding Officer in the Weapon Training School in the Royal Artillery Depot, Woolwich, he ended his military career as a Major in the Royal Artillery in 1946. This was a significant period in his life for self discovery and his marriage in 1942 to Elsie, who died in 1986 ending 44 years of a fulfilling and loyal partnership.

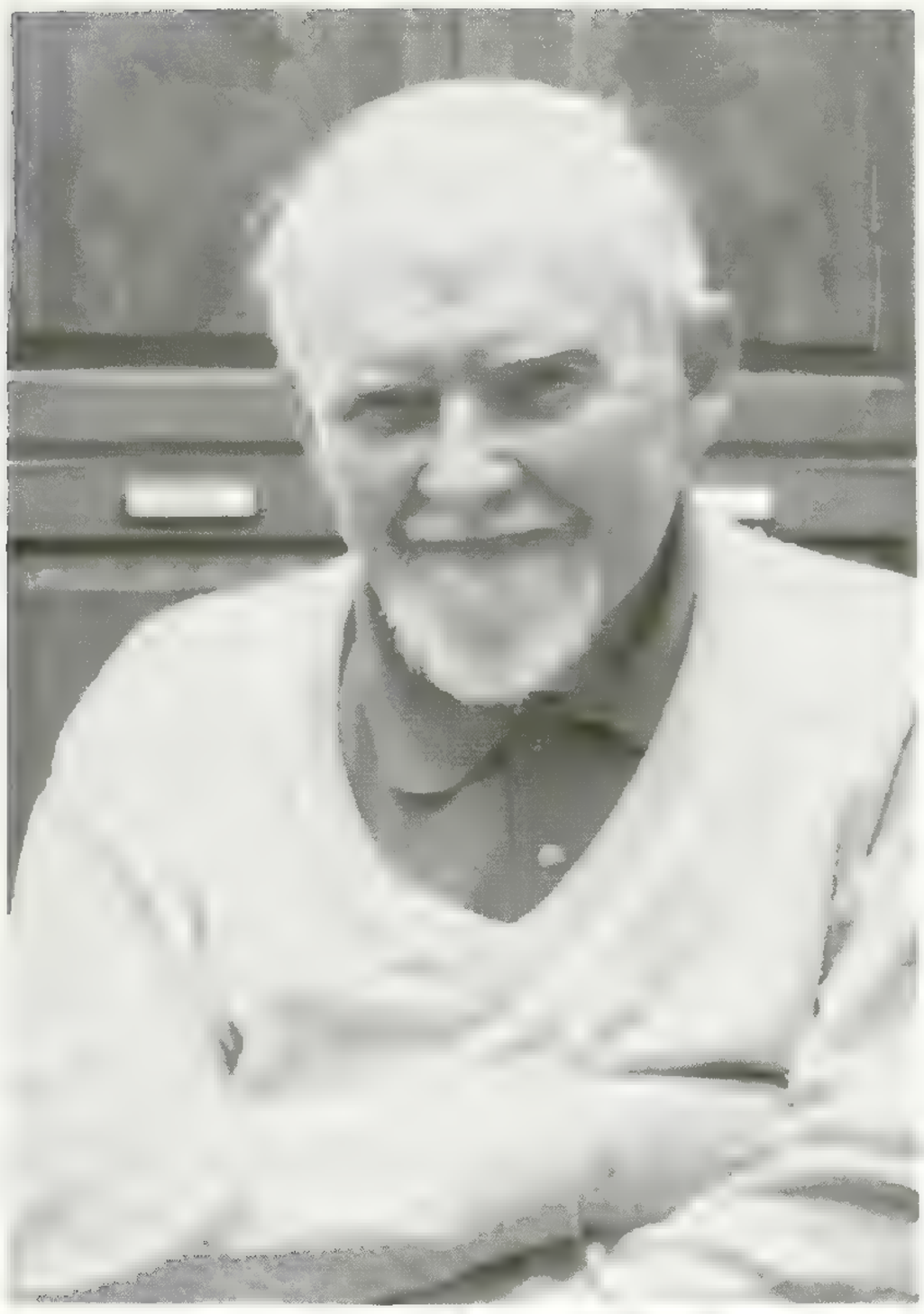

photo: Derek Adams (NHM Photo Studio)

Dennis Adams, April 2000

Immediately after the war he returned to King's College to resume his university education, graduating with 2nd Class Honours in his BSc General (Botany, Chemistry, Zoology) in 1948 and obtaining 1st Class Honours in a BSc Special (Botany) for which he was awarded the Carter Prize in Botany in 1949. A brilliant scholar, he was now poised to make his contribution to botany.

Post-war Britain was grim and depressing, and the opportunity to start a new life and career in one of the Crown Colonies, the Gold Coast (now Ghana), beckoned. A lectureship at the newly established University College of Gold Coast (University of Ghana) marked the beginning of a long and distinguished academic career in tropical plant ecology and taxonomy. His sojourn in Ghana from 1949 to 1959 led to numerous publications on West African vegetation and flora, focusing on pteridophytes and Compositae, establishing many new taxa, combinations and records.

The lure of writing and publishing Caribbean Floras took him to Jamaica to join the University College of the West Indies, Mona Campus (now the University of the West Indies) as a lecturer. The Jamaican era (1959-1976) would establish Dennis' reputation as the esteemed author of the *Flowering Plants of Jamaica* (1972) and other popular books such as *The Blue Mahoe & Other Bush* and *Caribbean Flora*. His formal academic career ended as a Senior Lecturer and Reader in Botany at the St Augustine Campus of the U.W.I. from 1976 to 1980.

C.D. Adams the scholar was equally matched by Dr Adams the lecturer. To many of his students he was a conscientious and gifted teacher who imparted his knowledge with humility, simplicity and clarity. A stickler for organisation and details, nothing escaped his sharp eyes and quick wit. Spelling errors or inaccurate use of terminology were the ultimate travesty in scientific writing! These were perfect attributes for a reviewer, and his expertise was always in demand. While he applauded modern technology, computer jargon made him cringe.

On retirement, he came full circle to his homeland and became an Honorary Associate at The Natural History Museum in London, where flora research continued uninterrupted. He soon became involved with *Flora Mesoamericana*, contributing the accounts of *Asplenium* and *Diplazium* as well as many genera of flowering plants, and several other Caribbean studies involving phytogeography, ethnobotany and conservation. One of the high points of his retirement was a UN/FAO (United Nations/Food and Agriculture Organization) assignment in 1983 to the Maldives where he "*made an extensive survey of the flora and is probably the only authority on the subject*" (Webb, P.A. 1988. *Maldives People and Environment*. Media Transasia Lt. Thailand).

At the personal level he was a very modest and private individual who shunned the limelight. In his spare time he 'taxonomised' his precious stamp collection. Close friends enjoyed his delightful company, with his quick repartee and double entendre. A number of tributes to Dennis were published in 2000 in *The Fern Gazette* (Vol. 16, pts 1-2: 1-10) to mark his 80th birthday.

We extend our deepest sympathies to Dennis' two surviving younger brothers, Michael and John Adams.

Yasmin S. Baksh-Comeau

RICHARD F. CARTWRIGHT 1910 – 2005

Dick Cartwright joined the Society in 1959 and quickly became involved with the Society's activities. In 1963 he volunteered to become the Society's Colour-slide Librarian and encouraged members to donate slides of ferns and fern allies to build up a comprehensive collection for the Society. In 1966 he was instrumental in providing a table demonstration of ferns for the BPS at the Royal Horticultural Society's June Show in London.

In addition to his interest in growing ferns, he was a keen member of the Alpine Garden Society.

In 1975, due to the illness of David Russell, Dick agreed to take over the Society's Spore Exchange Scheme and in the fourteen years he was responsible for it, the list of spores available to members topped over 500 species and forms. He was a frequent attendee at the Society's field meetings and always attended the West Midland Regional meetings. We also enjoyed his company at the Southport Flower Show during the 1970s, where many enquirers benefited from his wide experience of growing ferns and alpines.

In recognition of his services to the Society he was elected an Honorary Member in 1989.

Matt Busby

Although I only met Dick for the first time around 1970, I know he had a tough time serving in North Africa during World War II. While on duty delivering a despatch on a motorcycle he was blown up driving over a land mine. He was of course seriously injured, having part of one leg amputated and the other never fully recovered. He said to me many years later that he sometimes wished they had removed the other leg as well as it caused him so much discomfort.

Despite this dreadful legacy from the war, Dick was a very cheerful character who lived life to the full. In 1973 he drove Jimmy Dyce to visit me in Savoie in the French Alps, a long drive for anyone but all the more remarkable considering his handicap. We managed to get into the Alps a little, where Dick was very much at home in grassland liberally sprinkled with gentians, reflecting his love of alpines as well as ferns. On one sortie we were looking for *Woodsia ilvensis* near Mont Blanc. Typically, I had gone on ahead while Dick followed at his own pace – and he found the best fern of the day – *Asplenium septentrionale* growing by the side of the path!

During the late 1950s and 1960s he was in many ways Jimmy Dyce's right hand man. Living in Harlow in Essex, not far from Jimmy in Loughton, he was ideally placed to help Jimmy with organising meetings and other more routine Society business. I think Jimmy knew Dick before he joined the Society, I cannot remember how they met but it may have been through the local wine society.

During the 1970s he moved to Peopleton in Worcestershire. Not much later I moved over to live in Herefordshire. Occasionally my work took me to his area and if I had time I would call in out of the blue. Dick and his wife Audrey always made me feel most welcome, often giving me lunch. He still had some good ferns in his small garden, notably *Polystichum setiferum* 'Moly's Green', while his third bedroom was a BPS office for the spore exchange!

The Society has every reason to be grateful to Dick for helping guide the Society through the difficult times of the 1960s and '70s; without him stepping in to take over the spore exchange our membership number would have declined.

Martin Rickard

ALLAN MCGREGOR STIRLING 1924 – 2004

It was due to the southern polypody that I met someone soon to be called one of the best field botanists in Scotland. Reading of discoveries south of the Border, and of Dick Roberts' and Donal Synnott's work with pressed fronds, which showed that its range extended into Scotland and NE Ireland, I felt that this fern might grow in our mild west. A mutual friend suggested I get in touch with Allan Stirling to get his opinion. Allan hid his astonishment well at the thought of *Polypodium australe* (*P. cambricum*) occurring in SW Scotland. This was in 1971 when, despite the Gulf-stream and palm trees in the Highlands, the general perception was that 'southern' species would not occur in Scotland. He joined the BPS that same year.

Allan had long been a member of the Glasgow Natural History Society, going on many of their European trips as well as joining some of the Carr Botanical Expeditions to Spain, so he already had a wide knowledge of plant communities. As a keen bryologist, his discerning eye for mosses told him where the more basic rocks were. Armed with *The Limestones of Scotland* (Robertson *et al.* 1949) and a good microscope to look for branched paraphyses, he was ready for what we called 'the great polypody hunt'. We discovered southern polypody in eleven sites, the rare hybrid *P.* x *font-queri* (*P. vulgare* x *P. cambricum*) on Maidenbower Craigs near Dumfries and a colony of *P.* x *rothmaleri* (*P. cambricum* x *P. interjectum*), now called *P.* x *shivasiae*, on the Solway coast. Correspondence with Dick Roberts helped considerably. The findings were published in 1972 (*British Fern Gazette*) and 1973 (*Watsonia*).

With the assistance of Anne Sleep, Allan next tackled what was then regarded as *Asplenium cuneifolium*, but is now generally considered just a serpentine form of *A. adiantum-nigrum*. Following old records for curious forms of black spleenwort and clues in Jimmy Dyce's 1957 *Gazette* paper, and armed with Anne's tiny glass tubes, Allan went all over Scotland to serpentine outcrops collecting tiny bits of living fronds. About 16 sites were found in Scotland. He and Dick Roberts reported their findings in the *Gazette* in 1974, and four years later, with three others, including Anne Sleep, Allan wrote on this fern's chromosome counts.

Allan felt that the limestones of Inchnadamph in Sutherland might yield the rare *Polystichum* x *illyricum* (*P. aculeatum* x *P. lonchitis*), first found in Ireland in 1932. He went north in 1973, and with Nature Conservancy permission took three fronds; Anne Sleep confirmed them. Later that year they visited Inchnadamph and found almost 40 crowns; this was published in *Watsonia* the next year.

It is believed that he wrote or assisted with between 40 and 50 papers and articles. He was BSBI recorder for VC 99 (Dunbartonshire) from 1961 till 1987 when Ayrshire became vacant – he'd always wanted VC 75. I took over his old VC on the proviso that he named 'criticals' – roses, sedges, hawkweeds, dandelions, willows and brambles, all of which he mastered, working with experts in the field until he was able to name other people's difficult plants. In the 1970s the BPS visited Colvend by the Solway; some members were startled when two people arrived with a big polystyrene fish box in the boot filled with fresh fronds of puzzling *Dryopteris* and putative *Polystichum* x *bicknellii* for Clive Jermy!

Allan was generous not only with his time, but was also my 'wheels'. He was game for many things, happily diverting to an antique shop or plant nursery where he would examine what he called 'weedy things'. We worked well as a team; my vertigo kept me at the base of cliffs and steep places while he explored above. He was a true companion. Though sometimes quiet, with little small talk, he could be the life and soul of the party. He will be greatly missed, but remembered by his truly vast herbarium, which has been donated to the Royal Botanic Garden, Edinburgh, and the duplicates will eventually find their way to the Kelvingrove Museum, Glasgow.

Alison Rutherford

DAVID ROGER GIVEN 1943 – 2005

David Given was a plant systematist who specialised in the predominantly New Zealand genus *Celmisia*. He took a particular interest in the Chatham Islands and their fern flora, and was actively engaged in a programme to determine the age, origin and evolution of that flora. But it was his pioneering work in New Zealand plant conservation where he excelled, working for the NZ DSIR (Dept of Scientific and Industrial Research) until 1991. During that time he was involved with the International Union for the Conservation of Nature, and became a member of their Species Survival Commission's Steering Committee. In 1997 he was asked to chair their Plant Conservation Committee and he continued to inspire and steer this group until 2004.

He and I met in the UK in 1974 when he visited the Natural History Museum and Kew. In 1983, at the International Botanical Congress in Sydney, David joined me and other pteridologists in forming the International Association of Pteridologists. We set up a number of committees and David became chair of the IAP Conservation Committee. Two years later the IUCN/SSC invited members of that group to become the SSC Specialist Group for Pteridophyta, with David as its first chair. He had begun preparing a Pteridophyte Action Plan and prepared a draft list of the *Top 50* most endangered ferns. He gave the keynote address at the international symposium the BPS organised with the SGP in the UK in 2001.

David died on 27th November 2005, in Christchurch, New Zealand, after a brave battle with cancer. His loss is felt most deeply by the many he mentored throughout the conservation fraternity. He was always positive in his advice, which was usually given with a witty sense of humour.

Clive Jermy

IN MEMORIAM

We were also sorry to learn of the death of the following members (date joined BPS in brackets):

M. Yves Bernard of Hauts-de-Seine, France (1980)

Mrs Elaine Borwick of Perthshire (1982)

Mr Gerald G. Edwards of Fife (2003)

Dr Gerhard Schulze of Rheinland-Pfalz, Germany (1965). In 1981 Gerhard attended a BPS meeting in Wales, when his "fern knowledge was a great asset to the party". He will be missed on GEP meetings, where he always enjoyed interesting discussions on ferns. He recorded several new fern species for Corsica and Germany.

Dr Trevor G. Walker of Newcastle-upon-Tyne (1960); obituary to be published in the 2006 *Bulletin*.

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** new members 2005, ** new members 2006, # members rejoined 2005, ## members rejoined 2006*

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MEETINGS PROGRAMME 2006

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Meetings Subcommittee: M.H. Rickard, N.J. Hards, J.M. Ide, A. Leonard, P.H. Ripley

Sat. 25 March	**AGM & Spring Indoor Meeting – Cambridge** Leader: Barrie Stevenson
Sat. 10 - Sun. 11 June	**Weekend Field Meeting – Isle of Wight** Leader: Graham Ackers
Fri. 30 June - Sun. 9 July	**Overseas Field Meeting with Hardy Fern Foundation – Germany** Leader: Berndt Peters
Sat. 22 - Sun. 23 July	**Weekend Field Meeting – Yorkshire Dales** Leader: Barry Wright
Thurs. 17 - Sun. 20 Aug.	***Southport Flower Show: BPS Stand** Further Info.: Michael Hayward
Sat. 16 - Sun. 17 Sept.	**Weekend Field Meeting – Tamar Valley, Devon & Cornwall** Leader: Matt Stribley
Thurs. 19 - Sun. 29 Oct.	**Overseas Field Meeting – Réunion Island, Indian Ocean** Leader: Paul Ripley & Pat Acock
Sat. 18 Nov.	**Autumn Meeting – *A BPS Miscellany* – The Natural History Museum, London** Leader: Graham Ackers

** Event supported by, but not organised by, the BPS.*

For further details of these and other meetings of interest to members, including information on accommodation, please see the separate Meetings Programme sheet. This can be sent to overseas members on request.

Regional Meetings

For details of additional meetings in the following areas, please contact the regional organisers, enclosing a stamped addressed envelope.

Leeds & District	B. Wright, 130 Prince Rupert Drive, Tockwith, York YO26 7PU e-mail: Leeds@eBPS.org.uk
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